

"Environmental Print as a Catalyst for L2 French Reading Development in Senegal"

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Dr. Moustapha FALL

Département de Linguistique Appliquée
Université Gaston Berger de Saint-Louis (Sénégal)
Associé en enseignement, École de langues, linguistiques et
cultures de l'Université de Victoria de la Colombie britannique
fallm77@gmail.com

Abstract

This article examines the critical role of home literacy and environmental print in early reading development and its implications for second-language (L2) French acquisition in Senegalese schools. Prior research highlights that children's early exposure to print-rich environments significantly shapes their reading readiness and long-term literacy success. However, the degree of such exposure varies widely across cultural contexts, with substantial effects on children's familiarity with print and early alphabet knowledge. Drawing on a recent experimental study published in 2020; this paper investigates the linguistic and cognitive factors contributing to Senegalese students' difficulties in reading French as an L2. The study, conducted with both schoolchildren and their parents, evaluates how early home reading practices and exposure to environmental print influence L2 reading development. Findings reveal that limited environmental print and inconsistent parental engagement in early literacy activities pose significant challenges to young learners' reading comprehension in French. The article concludes by outlining the specific reading difficulties encountered by elementary students and emphasizing the need to consider environmental print as a foundational component of effective L2 reading instruction.

Keywords: environmental print, home literacy, L2 French acquisition, reading development, parental engagement.

Résumé

Cet article examine le rôle essentiel de la littérature familiale et de l'imprimé environnemental dans le développement précoce de la lecture et leurs implications pour l'acquisition du français langue seconde (L2) dans les écoles sénégalaises. Les recherches antérieures soulignent que l'exposition précoce des enfants à des environnements riches en imprimés influence fortement leur préparation à la lecture et leur réussite en littérature à long terme. Cependant, le degré de cette exposition varie largement selon les contextes culturels, avec des effets importants sur la familiarité des enfants avec l'écrit et leur connaissance initiale de l'alphabet. S'appuyant sur une étude expérimentale récente publiée en 2020, cet article analyse les facteurs linguistiques et cognitifs qui contribuent aux difficultés rencontrées par les élèves sénégalais dans la lecture du français en tant que L2. L'étude, menée auprès d'écoliers et de leurs parents, évalue l'influence des pratiques de lecture à domicile et de l'exposition à l'imprimé environnemental sur le développement de la lecture en L2. Les résultats révèlent que la faiblesse de l'imprimé environnemental et la variabilité de l'implication parentale dans les activités de littérature précoce constituent des obstacles majeurs à la compréhension écrite en français chez les jeunes apprenants. L'article conclut en présentant les difficultés spécifiques de lecture rencontrées par les élèves du primaire et en soulignant la nécessité de considérer l'imprimé environnemental comme un élément fondamental d'un enseignement efficace de la lecture en L2.

Mots-clés : impression environnementale, littérature familiale, acquisition du français L2, développement de la lecture, implication parentale.

Introduction

The importance of home literacy, and therefore environmental print, has been widely advocated in the literature as one of the building blocks of any successful reading at school (Adams, 1990; McBride-Chang, 2004; Snow et al., 1998). Home literacy is a generic term used to describe an informal learning environment. Readers, especially children, are exposed to a wide range of written print, including but not limited to storybooks, textbooks, journals, newspapers, the internet, and shopping lists. When the home is filled with environmental print, children may begin to develop their awareness and formulate questions about the importance of reading in general. Beginning to learn about reading or becoming aware of environmental print is clearly the first skill that children develop before they even open a book. “The likelihood that a child,” Adams writes, “will succeed in the first grade depends, most of all, on how much she or he has already learned about reading before getting there” (Adams, 1990, p.8).

It should also be noted that parents themselves can either foster their children’s reading interest or suppress it. While the home is filled with print, parents have the responsibility to share storybooks with their children through reading. Nevertheless, research indicates that the amount of reading parents do at home varies enormously across cultures. For example, in a typical wealthy American home, parents read to their children almost every day, resulting in hundreds or thousands of hours of literacy exposure before they enter school (Adams, 1990). This early exposure clearly gives these children an advantage when they begin reading. Having an early knowledge of the letters of the alphabet helps foster children’s reading.

Our recent study, published with Routledge in 2020, makes a significant contribution to understanding the linguistic and cognitive mechanisms underlying students’ difficulties in reading French as an L2 in Senegalese schools as a result of environmental print considerations. While no current studies systematically examine similar reading difficulties in other foreign languages such as Arabic, English, or Spanish, our research has significantly contributed to the debate on how environmental print and early reading experiences at home can play a critical role in L2 acquisition. Our experimental study, conducted with both school children and their parents, provides new insights into the development of L2 reading skills in the Senegalese context. By analyzing the impact of early reading comprehension and exposure to environmental print on L2 reading

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development in French, we gathered compelling evidence that students face significant challenges in reading French as a second language.

This paper addresses the role of environmental print in L2 French reading development in Senegal and how the lack of its development contributes significantly to reading difficulties at school. It starts with a very brief contextualization of the nature of home literacy in Africa in comparison other nations, and provides a very short literature review on the issue of environmental print, followed by the methodology regarding the population sample, instrument, procedure and discussion of results.

1. Context of Home Literacy in Senegal

Home literacy is well implemented in most African (e.g., Mali, Mauritania) and Asian countries (e.g., China, Hong Kong, and Singapore). In China, for example, many families have devoted special “reading corners” at home where children can incorporate print in their play by making tickets for a puppet show or signing their names on artwork (Li & Rao, 2000). The case of China resembles Senegal in many respects because these “corner schools” also exist across Senegal under a different name. Mostly known as Daaras in Senegal, these “Qur’anic reciting corners” offer informal education to young children around three to four years old in the Quran.

Children enrolled in these Daaras are first initiated into the Arabic language and then gradually taught the basics of reading, writing, and reciting the Quran. Given the spiritual dimension associated with teaching the Qur’an to young children, the vast majority of Muslim parents in Senegal never miss the opportunity to enroll their children in these Daaras prior to sending them to French schools. What is interesting about Daaras is that children, under the supervision of a sheik, are highly trained in the nursery rhymes and the alphabet of the Qur’an. An argument could be made that teachers in Daaras act as substitutes for many parents in providing children with the aforementioned home environment filled with print. Most significantly, Daaras become the home environment in which children, through the mediation of self-trained religious leaders, are exposed to early decoding and reading skills by learning and reciting the Quran.

2. Literature Review

In the 1970s, researchers seeking solutions to children's reading difficulties primarily focused on first language (L1) reading, while research on second language (L2) reading was nearly nonexistent. Later, as researchers began investigating challenges faced by L2 readers, their work was largely influenced by prior studies on L1 reading. Although it is now widely acknowledged that L1 and L2 reading differ in many ways (e.g., Grabe, 2009; Koda, 2005), much of the research on L2 reading continues to be shaped by findings from L1 reading studies.

One key finding in L1 reading research is that vocabulary knowledge is crucial for comprehension. As Ishii and Schmitt (2009) noted, a strong vocabulary base is "essential for learners wishing to function at a high level in English" (p. 6). Treiman and colleagues (2001) have demonstrated that knowledge of letters can facilitate both decoding skills and, most significantly, reading (Treiman et al., 2001). Moreover, if the home is filled with reading activities (e.g., note-writing, list-making, internet-surfing), children will be more inclined to accept reading as a normal way of life rather than as a foreign concept introduced only when they begin school (Adams, 1990). Feitelson & Goldstein (1986) found that 60% of pre-school children from neighborhoods in Israel where children perform poorly in later grades did not have a single book in their homes. In contrast, pre-school children from neighborhoods where children tended to do well in school had families who owned, on average, 54 books each (Feitelson & Goldstein, 1986, pp. 924-930, as cited in McBride-Chang, 2004, p.50).

In addressing this mediation, Bus (2001) found that individual parental responsiveness or teachers' intervention is a crucial element in the process of storybook reading. For example, parents who engage children in stories by asking follow-up questions and supporting their answers are more successful in maintaining children's interest. By contrast, parents who demonstrate a lack of interest in their children's reading stifle their interest in reading in general (Bus, 2001). Although these findings suggest that the home environment greatly facilitates reading from pre-school onwards, parental responsiveness and involvement in children's early development is perhaps the clearest evidence that the home environment affects reading skills. Reading to children alone might not be enough; an interactive dimension is necessary to strongly engage children in the reading process. In that regard, Vygotsky's (1978) experimental intervention study provides solid evidence

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on the parental role in children's reading readiness. His Zone of Proximal Development (ZPD), initially designed to show the help that L2 learners can receive from native peers, is now widely used to describe a scaffolding mechanism in which parents intervene in the child's literacy development. In other words, parents can help children achieve their maximum potential by supporting their efforts to learn to read (see Figure 2).

3. Methodology

3.1. Population Sample

Sixty Wolof children, learners of L2 French, were recruited from two elementary schools in Senegal. In addition to the student population, parents were recruited through semi-structured interviews to participate in this research. The educational environment for each group is presented separately. Given the types of pre-school education children receive, students in these school districts had different experiences prior to learning L2 French. For example, the overwhelming majority of children at Gaindé Fatma Elementary School in Touba received early pre-school education in the Quran before they learned L2 French. However, this was not always the case for children at Daroukhane B school district, who began learning the Quran later, after starting L2 French. The high literacy in Arabic among Qur'anic children at Gaindé Fatma could perhaps be explained by early resistance to French schools in the city of Touba.

3.2. Instrument

To gather comprehensive data on children's literacy experiences, we designed a questionnaire assessing their exposure to environmental print and early reading habits at home. The questionnaire, structured on a Likert scale, included four questions addressing two key themes: (1) literacy experiences at home, and (2) literacy experiences with others (e.g., friends, siblings, parents, or teachers). The Likert scale allowed us to measure the frequency of students' reading activities and quantify their responses:

- How often do you play word or letter games at home?
- How often do you use books at home?
- How often do your siblings or friends read to you?
- How often do your parents read to you?

Additionally, we conducted semi-structured interviews with parents to gain insights into their attitudes toward the French language. The interviews focused on three questions :

- What languages do you use at home?
- What language do you prefer for your child’s education?
- What is your overall attitude toward the French language?

Thirty parents participated, each interviewed individually with the same structured approach. Findings revealed patterns related to early literacy development at home, highlighting the importance of environmental print and parental involvement in shaping children's reading abilities.

3.3. Procedure

Both themes from the questionnaire were presented in a Likert scale format (NEVER = 1, SELDOM = 2, SOMETIMES = 3, OFTEN = 4, ALWAYS = 5). Each question and its response options were read aloud to children three times in Wolof. Children’s verbal responses were limited due to:

- The structured nature of the Likert scale, requiring predefined responses.
- The need to complete the questionnaire within ten minutes per participant.

Although presented in written form, the examiners translated the questions into Wolof and conducted the session entirely in that language.

3.4. Results

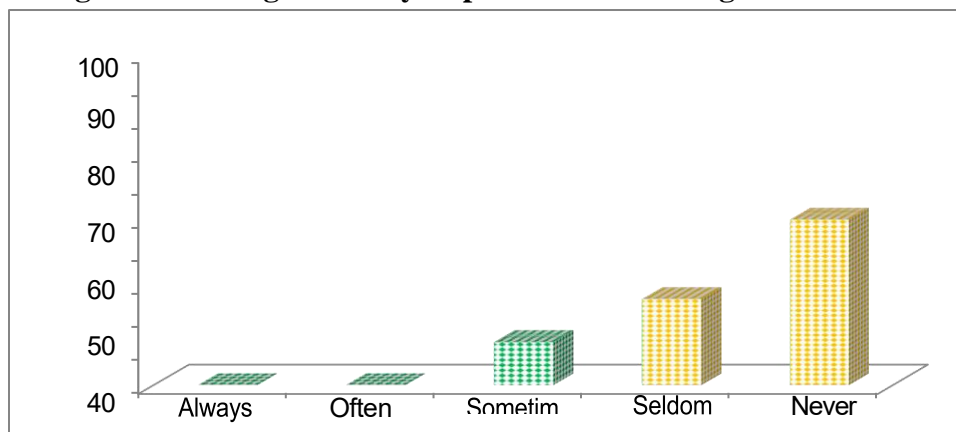
Themes of Literacy Experiences

Theme One: Students’ Literacy Experience of Reading at Home

Children were asked:

- How often do you play word or letter games at home ?
- How often do you use books at home?

Figure 1: Average Literacy Experience of Reading at Home



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Based on responses, 50% (N=30) of students reported never playing word games or using books at home. Additionally, 17% (N=5) seldom engaged in these activities, 13% (N=4) sometimes did, 3% (N=1) often did, and another 3% (N=1) always did. These findings suggest limited early exposure to print at home negatively impacts reading comprehension in French.

Theme Two : Students' Literacy Experience of Reading with Others at Home

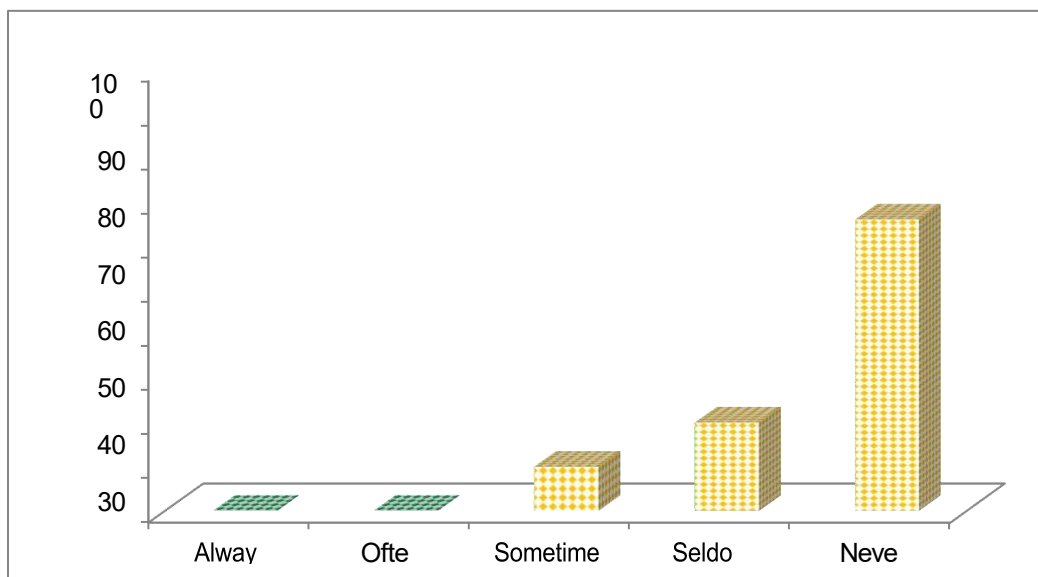
Children were asked :

- How often do your siblings or friends read to you?
- How often do your parents read to you ?

Figure 2: Average Literacy Experience with Others

Responses indicated that 67% (N=20) reported that parents, friends, or siblings never read to them. 17% (N=5) seldom, 10% (N=3) sometimes, and 3% (N=1) often. One child reported that others always read to them. These findings highlight the significant impact of lack of parental involvement on L2 French reading comprehension at school.

Figure 2. Average Literacy Experience with Others



Semi-structured Interviews with Parents

Theme Three: Parents' Attitudes Toward the French Language

Attitudes toward French are influenced by geographical area, religious affiliation, and ethnicity. 90% of parents in Touba expressed very negative attitudes toward French, while 54%

in Dakar were somewhat negative. Historical and religious reasons were most frequently cited in Touba.

Languages Used at Home:

- 65% (N=19) used Wolof.
- 21% (N=7) used other national languages (e.g., Jola, Mandinka, Soninké).
- 14% (N=4) mixed French with Wolof.

Parents preferred native languages but were more flexible in Dakar, reflecting a heterogeneous multilingual environment.

Preferred Language for Child’s Instruction:

- 57% (N=17) supported Wolof.
- 27% (N=8) preferred French.
- 10% (N=3) wanted Arabic first, then Wolof and French.
- 6% (N=2) abstained.

Overall Attitude Toward French:

- 54% (N=16) somewhat negative.
- 46% (N=14) positive.

Some parents acknowledged the practical benefits of French for professional success:

- “I don’t like French, but my children need it for jobs.”
- “French opens up opportunities, but local languages are important.”

3. 5. Discussion of Results

These findings align with literature emphasizing the importance of home literacy and environmental print in developing decoding skills and reading comprehension (Adams, 1990; McBride-Chang, 2004; Snow et al., 1998). Reading comprehension is a complex cognitive activity requiring phonological awareness and decoding skills. The study highlights the significant role of early literacy experiences in shaping L2 reading comprehension. Qur’anic children, despite not learning to read in Wolof, benefited from intensive exposure to Qur’anic texts in Arabic. This exposure provided decoding skills and a linguistic framework facilitating French reading

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comprehension. This finding supports Cummins' (1979) Linguistic Interdependence Hypothesis: proficiency in L1 can support L2 development.

Koda's (2005) Interactive-Compensatory Model emphasizes decoding skills as foundational to reading comprehension. The Qur'anic group's Arabic decoding training provided a solid base for approaching French materials, despite structural differences. The sequential linguistic journey of Qur'anic and non-Qur'anic groups underscores literacy's cumulative nature. The Qur'anic group's Arabic exposure to environmental print through the Daaras enriched their linguistic repertoire, enabling better navigation of French reading tasks.

In summary, early and intensive exposure to reading and recitation, even in a non-native language, lays a foundational framework supporting L2 reading acquisition. These findings reinforce the importance of robust early literacy practices to facilitate bilingual proficiency and academic success. Thus, parents must get involved more in creating the conditions of environmental print at home to boost students' reading skills very early on, which is a catalyst for L2 French reading at school.

Conclusion

The findings presented in this study collectively demonstrate that early home literacy practices and exposure to environmental print are fundamental determinants of children's later reading success, particularly in the acquisition of French as a second language in Senegal. The literature strongly emphasizes that reading development does not begin at school but is rooted in the informal literacy experiences children receive long before they encounter formal instruction. In line with research by Adams (1990), McBride-Chang (2004), Snow et al. (1998), and others, this study supports the view that children who grow up in homes rich with print—books, notes, lists, stories, and other textual materials—arrive at school already equipped with essential decoding and comprehension foundations. Conversely, the absence of such exposure has long-term consequences for reading in any language.

The data reveal that a significant proportion of Senegalese children do not participate in home-based literacy activities. Half of the children surveyed reported never using books or engaging with word or letter games at home, and more than two-thirds stated that no one - parents,

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siblings, or friends - reads to them. This lack of early print engagement means that many children enter school without the basic familiarity with text that is crucial for building L2 French reading skills. The findings further show that parental involvement in literacy is extremely limited, and this absence of guided and interactive reading experiences deprives children of the scaffolding known to improve decoding, vocabulary development, and comprehension. As research suggests, simply having print in the environment is insufficient; active mediation through questioning, guidance, and shared reading is vital for literacy growth.

Parental attitudes also significantly shape children’s literacy opportunities. Interviews revealed deep cultural, historical, and religious reservations toward the French language, especially in Touba, where 90% of parents expressed strong negative attitudes. These views affect not only the choice of languages used at home but also the extent to which parents encourage or discourage engagement with French reading materials. Parents overwhelmingly preferred Wolof or other national languages for instruction, and only a modest minority supported French as the primary language of education. This ambivalence—or in some cases resistance—toward French directly influences how much early French exposure children receive, further contributing to later reading challenges in school.

Yet, the study also reveals an important compensatory mechanism within the Senegalese context. Many children—particularly those in the Gaindé Fatma school district—receive extensive early literacy training in Qur’anic Daaras before entering French school. These Daaras function as culturally embedded literacy environments where children learn the Arabic alphabet, practice decoding, and engage daily in structured recitation. Even though this literacy occurs in Arabic rather than in their native Wolof or in French, it provides children with critical metalinguistic skills, phonological awareness, and procedural knowledge about how written language works. This early decoding experience aligns with theoretical frameworks such as Cummins’ Linguistic Interdependence Hypothesis, which argues that underlying literacy skills transfer across languages, and Koda’s Interactive-Compensatory Model, which highlights the foundational role of decoding in reading comprehension. Thus, Qur’anic training equips children with cognitive tools that facilitate their later acquisition of French reading skills, despite the linguistic distance between Arabic and French.

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The contrast between students with and without early Arabic literacy exposure underscores the cumulative and transferable nature of reading development. Children with Qur'anic backgrounds enter French school with structured literacy habits and decoding proficiency, allowing them to navigate French texts more effectively than peers who lacked any early print exposure. This demonstrates that early literacy—regardless of the language—is a powerful predictor of later L2 reading success.

Taken together, these findings highlight a persistent gap in early literacy experiences among Senegalese children and reveal the long-term implications of this gap for L2 French reading acquisition. While the Daaras provide an important compensatory literacy foundation for many children, the absence of environmental print and parental involvement in the home remains a major barrier to widespread reading success. The study therefore calls for a stronger emphasis on parent education, greater promotion of print-rich home environments, and enhanced awareness of the importance of early literacy practices. Encouraging parents to participate more actively in shared reading, even in their native languages, can significantly boost children's readiness to learn French at school.

Ultimately, early and consistent exposure to print—whether through culturally rooted Qur'anic education or through home literacy practices—plays a decisive role in shaping children's L2 French reading outcomes in Senegal. Strengthening environmental print in homes, promoting positive parental engagement, and recognizing the value of early decoding skills across languages are essential steps toward improving overall literacy and academic achievement.

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