

The Impact of Input in the Development of Harmonious Bilingualism in French-Russian Children

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Introduction

The notion of **Harmonious Bilingual Development** proposed by De Houwer (2006) has been defined as the experience of a bilingual family when “subjective well-being is not negatively affected by factors relating to a bilingual setting” (De Houwer, 2020: 63). The concept has been generating growing interest, and several studies have examined the relationship between children’s language competence and their subjective well-being (Han, 2010; Winsler et al., 2014; Humeau et al., 2023). Furthermore, the role of parental and educator involvement in supporting simultaneous acquisition of multiple languages in social-emotional behavioral skills has been previously studied (Sun, 2022).

While the role of input in language acquisition has been demonstrated (De Houwer, 2018b; Pearson & Amaral, 2014; Schalley & Eisenclas, 2022; Unsworth, 2016), there is still a lack of precise knowledge regarding the quantity and quality necessary for harmonious development in children growing up in a multilingual environment (Meisel, 2017). Research on this question is particularly important as language exposure varies considerably from one child to another in terms of the quantity and quality of the input they receive, whether in a bilingual or monolingual family. The importance of input quantity has been demonstrated for the acquisition of different language components, such as vocabulary and morphosyntax (Cattani et al., 2014; Gagarina et Klassert, 2018; Hoff et al., 2014; Rodina & Westergaard, 2017; Sun & Ng, 2021; Unsworth, 2014), as well as fluency (Cohen & Mazur-Palandre, 2018). When discussing input quality, it is also necessary to study the diversity of speech heard by the child in their environment, as well as possible parental discourse strategies. Siblings, grandparents, educators, and friends are therefore varied sources of input for the bilingual child, and triggers of the desire to practice a particular language (Hoff et al., 2014; Pearson & Amaral, 2014). Similarly, reading, media, activities, and travel have a significant impact on language development. In fact, Sun (2019) studied the impact of input quantity and quality on the social-emotional behavioral skills of bilingual children in Singapore and found that language exposure rates had no significant effects. However, home reading activities (frequency of reading and visits to the library) predicted better scores in social-emotional behavioral skills.

Therefore, we have examined the quantity of exposure and the diversity of the input in the child’s environment, as well as possible parental strategies for language transmission (Schwartz, 2020). Since the bilingual experience is highly individual (De Houwer, 2015), we have also explored the relationships between parental attitudes towards bilingual education and children’s feelings about their bilingualism and their social-emotional behavioral skills, using both parent and child assessments.

The study thus aims to address two main research questions: 1) *What is the quantity and quality of input necessary for harmonious bilingual development?* and 2) *What is the relationship between parental attitudes towards bilingual education and children’s feelings about their bilingualism and social-emotional behavioral skills?*

Methodology

Participants

The study involved 49 French-Russian 5-year-old children living in France (M= 65.2 months, SD= 4.46): 37 simultaneous bilinguals (with two first languages, BFLA) and 12 children from Russian-speaking families (early acquisition of a second language, ESLA). Due to the COVID-19 crisis, data collection had to be carried out in a hybrid mode for five participants: the first session took place at home before the lockdown, and the second session was conducted via Zoom. Two assessments were conducted solely through Zoom.

Materials and Procedure

The unique aspect of this research lies in the evaluation provided by both parents and children. Parents completed the "Strengths and Difficulties Questionnaire" (Goodman, 1997) and the "Attitudes, Interactions, and Feelings in a Bilingual Context" questionnaire (De Houwer, 2017; De Houwer, 2018a). The mothers (34 Russian-speaking and 1 French-speaking) filled out the Bilingual Child Activities Journal (De Houwer, 2002). The children participated in linguistic narrative tasks - *MAIN* (Gagarina et al., 2012a; Gagarina et al., 2019) and *Michka* (Tiulkova, 2017) - in both Russian (Gagarina et al., 2012b) and French (Haiden & Knapp, 2012). Additionally, they were interviewed about their bilingual identity (using a language portrait to assess the presence of each language), their affection towards both languages (the "Amour" indicator), and their feelings about their language skills (self-assessment scale) (TALES@home, 2016). This thesis work focuses solely on the results of the 2L1 bilingual children (n= 36, 22 girls and 14 boys).

Results and discussion

Q1: What is the quantity and quality of input necessary for harmonious bilingual development?

In order to address our first research question, we operationalized several variables based on the obtained data:

1. To measure the quantity of input, we chose a relative estimation of *exposure* to Russian in a typical week for the child (94.5 waking hours), as proposed by MacLeod et al. (2013) and Unsworth (2013). This estimation was calculated by two raters using a provided grid (in percentage: $M(SD) = 38.1 (14.4)$, $MIN-MAX = 13.2-85.2$);
2. Several input quality scores, based on the *Bilingual Child Activities Journal* (De Houwer, 2002), were proposed: 1) *measures of Russian language maintenance*; 2) *duration of travels to Russian-speaking countries per year*; 3) *number of (non-)linguistic extracurricular activities in Russian per week*; 4) *total time spent on these activities per week*; 5) *total number of Russian-speaking interlocutors per week*; 6) *level of education of Russian-speaking parents*;
3. The parents' responses to the "Attitudes, Interactions, and Feelings in Bilingual Context" questionnaire (De Houwer, 2017; De Houwer, 2018a) were converted into 6 *attitude* scores and 1 *strategy* score;
4. The language proficiency of the children in Russian and French was assessed by both parents using the categories of "no differences" (n=10), "better in Russian" (n=11), and "better in French" (n=15). Additionally, the oral expression competence in Russian was evaluated, with 5 out of 36 children reported as not speaking Russian;
5. Social-emotional behavioral skills (Goodman, 1997) were assessed by Russian-speaking parents and operationalized by the following two scores: "strengths" (prosocial behavior) and "difficulties" (behavioral difficulties).

A hierarchical cluster analysis was conducted on these 18 variables for 36 2L1 participants. Four clusters were identified based on ANOVA analyses. The *Cluster 4* and *Cluster 2* stand out the most in terms of differentiation.

Based on our interpretation, children in *Cluster 4* may exhibit non-harmonious bilingual development, with lower scores in social-emotional behavioral skills. They do not express themselves in Russian and display the greatest disparity in affection between their two languages. Their exposure to Russian is low (27.9%), and they have fewer opportunities to travel or participate in extracurricular activities in Russian. The maintenance of the Russian language is less frequent among their parents, who also have a lower level of education. Additionally, they have less exposure to reading books in Russian. However, they often consume Russian media (255 min/week) and have a diverse Russian-speaking social circle, including older siblings.

Children in *Cluster 2* may exhibit harmonious bilingual development, with high scores in social-emotional behavioral skills. They speak both languages and have balanced affection for both. Their exposure to Russian is high (46.4%), with frequent travels to Russian-speaking countries and active participation in extracurricular activities in Russian. The maintenance of the Russian language is diversified among their parents, who also have a high level of education. Additionally, they benefit from regular exposure to reading books in Russian. They spend less time on Russian media (156 min/week) and have the most varied Russian-speaking social circle.

Q2: What is the relationship between parental attitudes towards bilingual education and children's feelings about their bilingualism and social-emotional behavioral skills?

The disparity scores indicating the degree of (im)balance in language presence, affection, and self-evaluated skills were calculated for children's attitudes, as well as the complicity score for agreement between parental attitudes within the parental couple. Non-parametric Spearman correlations were conducted to determine if a high degree of disparity was associated with children's social-emotional behavioral skills.

Attitudes towards languages showed a significant correlation with the score of social-emotional behavioral skills: 1) the less disparity in language affection, the more positive prosocial behavior was evaluated by fathers ($r = -0.325$, $p < .05$); 2) the greater the disparity in language affection, the higher the "weak points" score evaluated by fathers ($r = 0.424$, $p < .01$) and mothers ($r = 0.448$, $p < .01$); 3) the greater the disparity in self-evaluated skills, the higher the "weak points" score evaluated by mothers ($r = 0.369$, $p < .05$). No significant correlation was found between the disparity score in language presence and social-emotional behavioral skills. The presence of Russian and French in the language portraits was thus found not to be an appropriate measure without children's comments.

Our findings indicate that the well-being of bilingual children is linked to their positive feelings towards both languages. When children equally appreciate each language, they feel more competent in both, their social-emotional behavioral skills were evaluated as more positive by parents, and the Difficulty scores are lower. On the other hand, mastery of the sole societal language (French) is associated with more vulnerable social-emotional behavioral skills.

Conclusion

These results are in line with previous studies on harmonious bilingualism (Han, 2010; Humeau et al., 2023; Sun et al. 2018; Sun, 2019, 2022; Winsler et al., 2014), confirming the importance of both the quantity of input (with 40% being a significant threshold) (Schalley & Eisenclas, 2022; Unsworth, 2016) and its quality. Cluster analysis proves to be a very useful method for this type of data (Cattani et al., 2014). Given that 60% of our participants have a less than 40% exposure to Russian, interlocutors (grandparents, educators), Russian-speaking trips, extracurricular activities in Russian ("Russian school") as well as various strategies to maintain Russian are significant factors in harmonious bilingual development. Indeed, when parents actively engage in language transmission, children receive richer input both in terms of quality and quantity. This allows them to develop both languages in a way that all family members feel comfortable with when communicating.

Our analysis of parental reports and interviews with the children indicate that the well-being of bilingual children is linked to positive feelings that family members have towards both languages. These findings confirm the importance of parental awareness of the challenges of bilingual education (Hollebeke et al., 2020) and their agreement on the matter (Nakamura, 2019; Seo, 2022; Yamamoto, 2001), as well as the attitudes of the children, which also play an important role in their bilingual development (Zhang & Slaughter-Defoe, 2009; Wilson, 2019).

This study contributes to the description of harmonious bilingual development and supports the promotion of non-societal language learning: the more balanced children's attitudes are towards both languages, the more their social-emotional behavioral skills are evaluated as positive by their parents. Further analysis will be conducted on the relationship between these attitudes and fluency in the oral productions of bilingual children.

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