

DOI: [10.52950/TE.2021.9.1.001](https://doi.org/10.52950/TE.2021.9.1.001)

## **UNEXPECTED DISADVANTAGES OF A SIMULTANEOUS QUADRILINGUAL UPBRINGING, A CASE STUDY**

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### **Abstract:**

At the crossroad between linguistics and cross-cultural communication, multilingualism is frequently presented through its most positive perspective. However, if the long-term benefits outrun the disadvantages, frustration is often the dominant feeling among the speakers during their early years.

Based upon meticulous observations and careful collection of examples in a multilingual family, this article is a case study of the difficulties encountered by polyglots growing up with four simultaneous languages: Russian, French, Czech, and English.

Using the research framework usually developed for the study of bilingualism, the article reviews not only the psychological and cognitive difficulties encountered by tetraglots, but also the social and linguistic drawbacks they are confronted with. It also examines common multilingual strategies such as code-switching, words creation and language mixing.

It concludes that the linguistic development of tetraglots does not differ much from bilingual ones, except for the elongated period before acquiring production speech. Quadrilingual children tend to speak later than not only monolingual children, but also bilingual ones.

### **Keywords:**

Multilingualism, tetralingual, tetraglot, quadri-lingual, code switching, borrowings, cognitive development

**JEL Classification:** I29, Z10

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### **Citation:**

JEROME DUMETZ, ANNA VISHNYAKOVA, VALÉRIA DUMETZ-VISHNYAKOVA, ALEXANDRA DUMETZ-VISHNYAKOVA (2021). Unexpected Disadvantages of a Simultaneous Quadrilingual Upbringing, a Case Study. International Journal of Teaching and Education, Vol. IX(1), pp. 1-12., 10.52950/TE.2021.9.1.001



## 1. Introduction to tetralingualism

The studies of multilingualism are frequently multi-disciplinary, half across linguistics for its technicality, and across cultural studies for their social and psychological consequences.

Polyglots speaking more than four languages (called tetralingual individuals, quadrilinguals or tetraglots) are obviously less common than trilinguals, themselves dwarfed by the number of bilinguals. If up to half of the world speaks two or more languages (Ansaldo et Al., 2008), the share of tetraglots is believed to be around 3%. Less than one person per thousand is estimated to speak more than 5 languages. Logically, if bilingualism is an established academic subject, trilingualism is much less covered in studies (Guðmundsdóttir & Lesk, 2019). Consequently, quadrilingualism has received much less attention and available studies are mostly referring to multilingual territories such as Switzerland, but seldom about individuals learning simultaneously four languages (Porębski, 2010). If many case studies presented the development of bilingual children (Saunders, 1988, De Houwer, 1990), and occasionally of trilinguals (Dewaele, 2000), this article is an effort to fill the void of empirical studies of quadrilingual speakers. Hence, the topicality of this article resides first of all in its value as a case study (Abdelilah-Bauer, 2015).

Within this review of linguistics challenges faced by tetraglots, appears the topic of their cultural identification, a field of research often limited to so called Third-Culture-Kids introduced by Pollock and Van Reken (2010) but receiving too few academic focus (Chen et Al., 1998). Unfortunately, the young age of the participants prevents the authors from formulating ambitious cultural analysis, a theme which could be a useful future research topic, and keeps the focus of the analysis within the boundaries of consequences of this familial multiculturalism.

Finally, as the recent development of research on polyglots speaking four or more languages already showed the applicability of bilingual lexicon in multilingual processing (Kees de Bot, 2004), the authors of this paper further argue that literature findings on bilingualism and trilingualism can be used in the case of quadrilingualism. The article aims at illustrating that cognitive features, communication difficulties and cultural challenges displayed by tetraglots are overall equivalent to bilinguals and trilingual and that exiting literature for those two groups can be applied to this smaller cohort.

## 2. Methodology

Methods used for this case study are essentially Participant Observation based in order to collect qualitative data. This ethnographic technique comprises interviewing parties, observation of interactions but also document analysis (Kawulich, 2005). This paper was written within the family, through a *“process of learning through exposure to or involvement in the day-to-day or routine activities of participants in the researcher setting”* as suggested by Schensul et Al. (1999) in their illustration of the process.

Throughout the process, the main objective has been the systematic assessment of the linguistic levels of the children from outer observation (the parents) but also from the children themselves. A two-year multilingual study-log was created firstly by the children, assisted by the parents. Each entry has been reviewed and analysed by the authors, during in-depth interviews of the participants. During those reviews were analysed not only the communication and social consequences of those entries, but also their psychological and cognitive implications. The present article is an effort to contextualize the content of those embedded observations, structured around some key elements.

### 3. Standard benefits associated with multilingualism

Other than the pleasure of being able to comprehend and interact with more people in their own native language, early multilingual speakers share several benefits such as more creativity, greater social intelligence, greater cultural competence that have been well documented (Hoffmann, 2000; Pavlenko, 2007.) and often exaggerated among the monolingual community (Paradowski & Bator, 2016). As far as cognitive development is concerned, studies are conflicting about whether bilinguals are actually rating better than monolingual speakers, whether in Simon task, Stroop task or Flanker task (Marian et Al., 2013). However, most tests show a greater adaptivity among bilinguals, a celerity in shifting from one concept to another (Bialystok et Al, 2004). While this isn't necessarily developing into better cognitive ability, the benefit seems clear when the subject is aging. Studies are showing a clear cognitive gap between bilinguals and monolinguals, with bilingual children scoring much better than the monolinguals at Simon task for instance (Kail, 2015). Another benefit of multilingualism and age is observed regarding Dementia (Alzheimer's disease), where people who used more than one language throughout their life see a slowdown of the symptoms by up to 5 years (Diamond, 2010).

These benefits are not within the scope of this article and the authors assume tetraglots behave the same way as bilinguals and trilinguals (Poeste et Al., 2019). In particular, the authors did not clearly notice a metalinguistic awareness (the ability to objectify a language as a process as well as an artefact) significantly differed among bilingual and trilingual children previously observed (Gibson, & Hufeisen, 2006).

### 4. Context of the case study and linguistic evaluation

This article studies the linguistic interactions and subsequent difficulties encountered within a multilingual and multicultural family where four languages are spoken daily.

The family follows the "one person, one language" method, so-called "rule of Grammont": The mother speaks native Russian (RUS) to the children, while the father speaks native French (FRE). In addition, as the family lives in the Czech Republic, the Czech language (CZE) is the school and majority idiom. Finally, the spoken language of the parents is English (ENG) and is also their professional language. As a consequence, the two children (now aged 9 and 13) are embedded into a simultaneous acquisition of three languages (RUS/FRE/CZE) plus a passive acquisition of English (used among parents at home).

Quantitatively, the input in each language varies from members of the family. Parents are successive learners and their L1 is the dominant one (FRE and RUS), the L2 (ENG) is high too, due to intensive language studies and professional obligations. The parents' L3 (Mirroring L1) is restricted to selected areas, but of a high level. L4 (CZE) varies a lot from one parent to another, with one speaker nearly fluent in conversation and the second one much less able to learn this language. It is worth noting that speaker 1 (father) has previously learned a L5 (Spanish) which is still remembered well, despite seldom use. A L6 (Dutch), however, never imprinted much. The speaker 2 (mother) previously studied a L5 (German) but for too short a time to be of any use except at basic level.

The relatively high linguistic knowledge of the parents has prevented unfortunate shortcomings common among monolinguals adults infrequently listening to multilingual children, such as associating code switching with poor cognitive development. As a result, all the members enjoy a high level of understanding each other, in any language, limiting the risks of exclusion from one family member to the other, a known threat in multi-lingual families (Cunningham-Andersson & Andersson, 2004). One needs to highlight the relative proximity of all four languages, part of the Indo-European group, with two Slavic languages using different alphabet (CZE and RUS), a Romanic language (FRE), and a Germanic one (ENG).

Using standard bilingual terms (Baker, 2011), it is possible to present the use of languages as follows: the children have learned simultaneously Russian and French (4L1 & 4L2) as their parents' language, and 4L4 (ENG) as passive one. 4L3 (CZE) was actively acquired from the age of two for the eldest child, and from birth for the younger one. 4L3 is the language of the country and of school. In terms of input, it is now their main cognitive academic language (for school topics), while 4L1 and 4L2 enjoy a better input for non-academic topics, needed in social situations (their Basic Interpersonal Communication Skills). While the mother's language was dominant at the very early stages of speech, the father's languages caught up gradually during the next phases, as seen among tri-lingual families (Barron-Hauwaert, 2000). Both languages are acquired through domestic speech, but also with the use of school material brought from abroad (Pavlenko, 2017). Also, observations showed that language choice depends not only of the members involved, but also the original one used. For instance, as the Xbox is set up in French, playing any game is carried out in French, with exchange between the children exclusively in French. Most of the other games are carried out in English among the parents, Russian among the children, and everyone switches to Czech when Czech children are present.

The static interferences (permanent influence from other languages) shaping accents and syntactic structures as well as dynamic interferences are impacting their morpho-syntactic structures, a well-known characteristic among young polyglots. Typically, the various structures of languages (CZE/RUS/FRE/ENG) lead to the creation of grammatically correct sentences with wrong morpho-syntactic structure. For example: "Tu me donnes cette bleue assiette?" instead of "Donne-moi cette assiette bleue" where the noun and adjective are swapped to fit the Russian/Czech/English structure (Give me this blue plate).

The spoken accents of the languages vary greatly due to the source of phonetic teaching. Putting aside the sometimes-odd morpho-syntactic structure used, the Czech language (4L3) is spoken without distinctive accent by the children. French is spoken with a Parisian accent copied from the father, while English has a slight "Czech" accent borrowed from local teachers. Despite several attempts to get an external assessment in Russian, it wasn't possible to isolate a distinctive regional accent, probably due to the fact that this language is less categorized in regional sub-categories like French or English. They do, however, have a slower flow than children of their age, presumably due to the limited life-interactions they have with peers.

## 5. Psychological and cognitive consequences

The slow apprenticeship of speech is the most spectacular consequence of the simultaneous tetraglots. The children had to accumulate not only vocabulary in each language, but also the grammatical structure and the pronunciation of each language.

The link between the amount of input and the size of vocabulary is well established, for bilingual children. A 20% input reduction is linked to a reduction of production vocabulary. In our case study, this effect has been amplified due to the four types of input. As a result, if the degree of comprehension is believed to be similar to monolingual children, the curve of production vocabulary necessary for a Basic Interpersonal Communicative Skills (BICS) was delayed (only a few words spoken at three years) and slow (the speech capacity in any language at the age of six was equivalent to the one of a three y.o. monolingual child). The curve, however, tends to straighten up with the acquisition of reading. At around eight to nine y.o. the amount of production vocabulary in 4L1, 4L2 and 4L3 was similar to that of monolingual children. Compared to other studies in the field, observations here show an increased delay in speech production compared not only to monolingual children as expected, but also of bilingual ones.

A second area of study was vocabulary deficiency, a well-studied phenomenon among bilingual speakers, often biased due to assessments based upon monolingual cohorts (Byers-Heinlein, 2013). Our observations clearly show a reduced number of words in each language, even if the total sum of these words across languages is clearly much higher than for monolingual children of the same age. This leads to difficulties to denominate situations in all languages, including in the dominant ones. Interestingly, however, there is no sign of difference with monolingual children as to categorisation. Repetition of vocabulary is essential in this capacity and explains why both children have been watching the same cartoons and movies a large number of times. The lack of vocabulary has led, for several years to tantrums by those children who were stopped in their speech due to lacking words. The use of evasive techniques such as code-switching is a direct consequence of the diluted input of vocabulary among several languages, not uncommon among bilinguals. In our case, the amount of vocabulary acquired simultaneously is at least triple that of monolinguals, mathematically reducing the number of words assimilated in each language. As a consequence, the frustration of a lack of words is more frequent than with bilinguals, and lasts a longer in time.

The simultaneous acquisition of several languages generates problems at school of course. The Cognitive Academic Language Proficiency is notoriously one of the main challenges faced by bilingual children studying among monolingual pupils (Cummins, 1979). In our case, the vocabulary deficiency leads to an extra challenge to lift up their CALP. Several limits are hampering their academic development: linguistic ones (such as terms used in maths, chemistry and other topics), but also cultural ones necessary for humanities such as history or civic education. Parents often feel helpless when confronted with their own limits in secondary school's CALP: It's one thing to learn about the Pythagorean theorem at 13; it is another experience to receive « help » in four different languages! External help from local speakers has been brought in to assist. This, however, is felt as a real handicap by the children who find it unfair, almost

discriminatory, as they need to simultaneously learn academic concepts and the words to describe them (Yao, 2009).

An amusing observation lies with the acquisition of English, *at school*. From the first grade, children are taught basic English at school. Seemingly conflicting with an expected greater metalinguistic awareness (Jessner, 1999), it has been observed that the passive English acquired by the younger child (who has an adequate Basic Interpersonal Communication Skills in this language) is not associated with the language taught at school. This academic English is learnt by heart, without much practicality. It is as if the English taught at school was a different language to the one heard at home!

Another negative consequence of the multilingualism studied here is low self-confidence when it comes to the need to speak in public and the opinions of others. The occasional lack of corresponding vocabulary renders the perception of the children by their peers, and adults, upsetting. While physically the children are perceived as of a given age, their communication skills at an early age were much reduced. In order to compute correctly the information through patchy phrases, they had to listen intensively to the tutors, often taking a pause in their understanding. Naturally, this was perceived by others as a lack of cognitive maturity. Recent studies showed a lower scoring on the Simon task by trilinguals and we can easily assume the trend is similar with four languages. Despite early studies concluding on greater attentional control from bilinguals over monolinguals, new results suggest that managing two or three languages, compared to just one, may have a negative impact on inhibitory control and working memory performance (Guðmundsdóttir, 2019).

A common frustration shared by any polyglot is the constant exposure of one's linguistic capacities to others, for good or negative reasons. Frequently, outsiders feel the urge to correct language mistakes, a tiring experience over time. While the fluency in different languages is praised by monolingual speakers, no language is accepted as truly "native". Ultimately, being praised for a good command of one's native tongue can be upsetting: "Of course, I can speak well, this is my mother's tongue!". This has clear repercussions on their cultural identification and bears out the observations of Kirsch (2006) when claiming that "*second language learning (...) is not an 'automatic' or 'natural' process but (...) depends on their personal goals, interests, competence, confidence and understanding of what counts as appropriate language use.*"

Finally, an upbringing in a multicultural and multilingual environment as studied in this case, reveals unique difficulties related to the ethnocentrism of individuals and academic programs, in particular in history. Indeed, beyond the issue of vocabulary, the acquisition of academic knowledge is also influenced by the cultural environment of the participants. While the cultures involved in the case study are relatively close geographically (Czech Republic, France and Russia), the historical and political-historical gap is wide. Several topics have placed the family in a cultural quagmire such as Napoleonic conquests (including the retreat from Russia), the Munich agreements, the WW2 in general, the Prague Spring or expansion of the European Union. If the children benefit from an expanded common underlying proficiency compared to monolinguals and

probably bilinguals (Cummins, 1980), the central role played by languages in their cultural identity is, in some instances, almost a liability as far as schooling is concerned.

## **6. Communication and Social consequences**

Even outside the academic context, communication misunderstandings for tetraglots are in large number as soon as they switch to a different environment. Similar to the issue of the vocabulary deficiency in each language that is masking an overall broader linguistic repertoire (and categorization), the overall cultural education of the children is more diversified than for most children, but with shortcomings in each culture. Beyond those linguistics limitations, the lack of basic cultural cues (literature, movies, cartoons, games, etc) are an obstacle to social integration when exchanging with monolingual, monocultural peers.

An irritating characteristic of the multilingual life can be labelled the “live-dictionary problem”, when other people ask for word translation for no other reason than testing the polyglot. As the practice of several languages becomes the exclusive topic of communication, it becomes a liability in creating social and personal interaction. Being asked time and again in what language one dreams, counts and thinks is emotionally sensitive and can generate a desire to hide the polylingualism (Shakhovskiy, 2018).

As anyone belonging to multi-cultural families knows, multi-culturalism itself is (unfortunately) often the prime determinant of identity when encountering new people. In our case, as the cultural background is not visible among local children, it is tempting to hide this reality in order to be accepted more easily among peers. These efforts can create frustration among the family members, as this omission can be understood as a feeling of shame about one’s cultural roots. Also, friends often rush to blow the whistle, ruining efforts to blend in.

These issues might lead to a more serious consequence, mutism and isolation: The elder child (12 y.o. then) started to develop a “selective ear”, pretending to forget and not hear what was told to her. While it is understood to be a common characteristic of any teenager (even monolinguals!) the authors also suspected this symptom to be a signal that multilingualism was tiring her. It is observed most often by the end of the school week. It is also illustrated by the younger child (9 y.o.) who struggles every day to tell her father how the day went, in French, after a school day. The efforts to switch from one language to another is obviously draining their resources. This leads to frustration among family members, sometimes conflict and is another clear negative effect of multilingualism at home.

Despite constant efforts by the parents to keep the Grammont rule in use, a linguistic hybridity ought to appear (Lindquist & Garmann, 2019). A translingual practice emerges and new words are frequently created, often the unfortunate results of false cognates (in particular from CZE to RUS, and CZE to FRE).

Code-switching (from one language to another, words or sentences) and borrowing (phonological and morphological adaptation) are expectedly spread among these tetraglots. Besides creating fun “private” words and a sense of family culture, these linguistic phenomena are mostly seen as negative by the children themselves who feel different from their peers. As long as these appear



within the family circle, they are accepted, but outside, the children try to follow the languages' rules strictly, at the risk of speaking less or slowly.

Selected cases of tetraglot code switching and borrowings:

- Une « Raziet » in a French sentence, from Розетка (Rus), meaning electric socket (prise électrique).
- Les « Rasiesses » in a French sentence, from Расческа meaning hairbrush (brosses)
- On va faire le « rinok » in a French sentence, from рынок (Rus), meaning market (aller au marché - Alex)
- une Karzine in a French sentence, from корзина (Rus), meaning basket (panier)
- Un Liène in a French sentence, from laň or jelen (Cze), meaning deer (biche/chevreuil)
- On va « re-crosser » la rue, from 'to cross' (Eng), meaning cross-again the street.
- Смаркати in a Russian sentence, from сморкать in Russian and smrkat in Czech (to blow one's nose), but the real term is носовые платки (Mouchoirs)
- Racinka in a Russian sentences, from racines (Fre), meaning root.

Word creation leads occasionally to a word with a correct meaning. For instance:

- Re-aller quelque part (to return somewhere)
- Faire des chicotes, chicoter (here from the Russian щекотка, meaning tickling. But in French Canadian, chicoter means to be worried.)
- Tablitchki as an attempt to say chocolate in Russian, from 'tablette de chocolat' (Fre) instead of плитка шоколада, meaning chocolate bar. While Tablitska means a flat slab, such as clay or wax tablets, but is not applicable to chocolate!

All these examples happen in bilingual environments, yet in our case study the examples involve several languages in multiple combinations, among the same familial cluster. Naturally, some humorous situations stem from some linguistic misunderstanding, for instance the youngster (eight y.o. then) refused to eat some soup with noodles at a Czech friend's house, believing it was soup with snot. This is easily explained when one knows that Czechs say « nudle » for both words, in a colloquial manner. Under such circumstances, anyone would hesitate before accepting this noodle soup! Also, a perfect illustration of metalinguistic awareness, can be found in the following deliberate multilingual play of words, again by the younger child, eight y.o.: « Aujourd'hui j'ai mangé un « gros chat »; which can be translated as « today I ate a big cat ». In reality, she had just eaten a pear, груша in Russian, which sounds in French like "gros chat"!

As far as the communication issues are concerned, however, the main handicap resides in morpho-syntactic and pragmatic abilities in speech. When exchanging with their peers and other native Czech speakers, this is experienced as a severe source of anxiety and stress. While Czech is L1 in many topics (mostly academic), those morpho-syntactic structures' distortions are common in all four languages, for example:

- « C'est pas à cause de moi que j'parle » (I'm not talking about you)
- Je (préfère) le russe quand je joue, parce que le russe je le parle bien. Le tchèque c'est plus difficile un petit peu. » (Approximately meaning: I prefer Russian language when I play because I speak it well. Czech is more difficult, a little bit)

- Toi tu sam joues (You play alone)
- Перед пяти минут instead of Пять минут назад, from the Czech Před pěti minuty (five minutes ago)
- Подожди *на* меня instead of Подожди меня, with the Czech version being Počkej *na* mě (wait for me)

These morpho-syntactic structures errors are common among any group of multilingual children, in particular bilingual ones, and has been well documented. In our tetraglots case, the scope is spread among several languages, complexifying the original meaning of the sentences.

The final observation addresses the issue of cultural belonging. Indeed, the children are typical examples of what Pollock and Van Reken (2010) call “Third Culture Kids”: Their self-identity is neither one of the parents, nor of the host country. In our case study, we could call them Fourth-culture kids as the parents come from different countries both different from the host country. This is a blend between a chosen multilingualism (the parents come from different cultures) and a de facto multilingualism (the family moved to a different country). The question of cultural identity is a central topic in the family, where cross-cultural studies are the topic of research of one of the parents. The feeling of not belonging fully to any culture may cause dramatic psychological issues and needs to be addressed carefully (Dumetz et Al., 2012). The risk of generating a quasi-culture looking like an illusion of belonging is very frequent among second generation immigrants. Another potential trauma lies with the feeling of being different from fellow classmates, an existential issue at teenage time. A tentative solution is tested through the flexibility of choice offered to the children. It has been said to them very early on that their cultural identity is not “50/50” but 100% and 100% of the parents’ home culture, plus 100% of the host country. After all, Czech is their school-language, a social tool which is best mastered by the children. As a result, the children are slowly creating their own, ad-hoc culture, a sometimes-painful process acknowledged by any multicultural adult.

## Conclusion

Tetraglots speak four languages. The benefits associated with growing up speaking simultaneously these languages are often hiding drawbacks that can be traumatic to the children.

These difficulties are not only psychological but also cognitive, particularly impacting academic life. In addition, communication and social hindrances can be disturbing for monolingual peers sometimes associating multilingualism with oddity. In particular, a noticeable difference (with the monolinguals and bilinguals alike) is the relative delay in time to produce the Basic Interpersonal Communicative Skills. The Common Underlying Proficiency (CUP) developed in a quadrilingual environment, luckily, helps attenuate the apparent cognitive and communication gaps with monolingual peers over the years.

As a result, the article reflects that from a cognitive development perspective, an upbringing in four languages is overall corresponding with previously published observations of bilingual children. The authors conclude that existing literature on bilingualism may then be applied to quadrilingualism, for the benefits as well as for the drawbacks.

## References:

- Abdelilah-Bauer, B. (2015). *Le défi des enfants bilingues. La découverte*.  
<https://doi.org/10.3917/dec.abdel.2015.01>
- Ansaldo, A. I., Marcotte, K., Scherer, L., & Raboyeau, G. (2008). Language therapy and bilingual aphasia: Clinical implications of psycholinguistic and neuroimaging research. *Journal of Neurolinguistics*, 21(6), 539-557. <https://doi.org/10.1016/j.jneuroling.2008.02.001>
- Baker, C. (2011) *Foundations of bilingual education*. Bristol: Multilingual Matters.
- Barron-Hauwaert, S. (2000). Issues surrounding trilingual families: Children with simultaneous exposure to three languages. *Zeitschrift für interkulturellen Fremdsprachenunterricht*, 5(1).
- Bialystok, E., Craik, F. I., Klein, R., & Viswanathan, M. (2004). Bilingualism, aging, and cognitive control: evidence from the Simon task. *Psychology and aging*, 19(2), 290. <https://doi.org/10.1037/0882-7974.19.2.290>
- Byers-Heinlein, K. (2013). Parental language mixing: Its measurement and the relation of mixed input to young bilingual children's vocabulary size. *Bilingualism: Language and Cognition*, 16(1), 32-48. doi:10.1017/S1366728912000120
- Chen, C., Greenberger, E., Lester, J., Dong, Q., & Guo, M. S. (1998). A cross-cultural study of family and peer correlates of adolescent misconduct. *Developmental psychology*, 34(4), 770. <https://doi.org/10.1037/0012-1649.34.4.770>
- Cummins, J. (1979). Cognitive/Academic Language Proficiency, Linguistic Interdependence, the Optimum Age Question and Some Other Matters. *Working Papers on Bilingualism*, No. 19.
- Cummins, J. (1980). The construct of language proficiency in bilingual education. *Current issues in bilingual education*, 81-103.
- Cunningham-Andersson, U., & Andersson, S. (2004). *Growing up with two languages: A practical guide*. Routledge. <https://doi.org/10.4324/9780203412961>
- Dewaele, J. M. (2000). Three years old and three first languages. *The Bilingual Family Newsletter*, 17(2), 4-5.
- De Houwer, A. (1990) *The acquisition of two languages from birth: A case study*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511519789>
- Diamond, J. (2010). The benefits of multilingualism. *Science*, 330(6002), 332-333. <https://doi.org/10.1126/science.1195067>
- Dumetz, J et Al., (2012). *Cross-cultural management textbook: Lessons from the world leading experts*, CreateSpace.
- Gibson, M., & Hufeisen, B. (2006). Metalinguistic processing control mechanisms in multilingual learners of English. *International Journal of Multilingualism*, 3(2), 139-153, DOI: [10.1080/14790710608668393](https://doi.org/10.1080/14790710608668393)
- Guðmundsdóttir, M. D., & Lesk, V. E. (2019). Does the bilingual advantage extend to trilingualism?. *International Journal of Multilingualism*, 16(4), 549-562., DOI: [10.1080/14790718.2019.1617717](https://doi.org/10.1080/14790718.2019.1617717)
- Hoffmann, C. (2000). Bilingual and trilingual competence: Problems of description and differentiation. *Sociolinguistic Studies*, 83-92. <https://doi.org/10.1558/sols.v1i1.83>
- Jessner, U. (1999). Metalinguistic awareness in multilinguals: Cognitive aspects of third language learning. *Language awareness*, 8(3-4), 201-209, DOI: [10.1080/09658419908667129](https://doi.org/10.1080/09658419908667129)
- Kail, M. (2015). *L'acquisition de plusieurs langues: «Que sais-je?» n° 4005*. Presses universitaires de France.
- Kawulich, B. B. (2005). Participant observation as a data collection method. In Forum qualitative sozialforschung/forum: *Qualitative social research* (Vol. 6, No. 2).

- Kees de Bot (2004) The Multilingual Lexicon: Modelling Selection and Control, *International Journal of Multilingualism*, 1:1, 17-32, DOI: [10.1080/14790710408668176](https://doi.org/10.1080/14790710408668176)
- Kirsch, C. (2006). Young children learning new languages out of school. *International Journal of Multilingualism*, 3(4), 258-279, DOI: [10.2167/ijm035.0](https://doi.org/10.2167/ijm035.0)
- Lindquist, H., & Garmann, N. G. (2019). Toddlers and their translingual practicing homes. *International Journal of Multilingualism*, 1-14. DOI: 10.1080/14790718.2019.1604712
- Marian, V., Blumenfeld, H. K., Mizrahi, E., Kania, U., & Cordes, A. K. (2013). Multilingual Stroop performance: Effects of trilingualism and proficiency on inhibitory control. *International journal of multilingualism*, 10(1), 82–104. doi:10.1080/14790718.2012.708037
- Paradowski MB, Bator A (2016). "Perceived effectiveness of language acquisition in the process of multilingual upbringing by parents of different nationalities". *International Journal of Bilingual Education and Bilingualism*. 21 (6): 1–19. <https://doi.org/10.1080/13670050.2016.1203858>
- Pavlenko, A. (2007). *Emotions and multilingualism*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511584305>
- Pavlenko, A. (2017). Linguistic landscape and other sociolinguistic methods in the study of Russian language abroad. *Russian Journal of Linguistics*, 21(3), 493-514. <https://doi.org/10.22363/2312-9182-2017-21-3-493-514>
- Poeste, M., Müller, N., & Arnaus Gil, L. (2019). Code-mixing and language dominance: bilingual, trilingual and multilingual children compared. *International Journal of Multilingualism*, 16(4), 459-491 DOI: 10.1080/14790718.2019.1569017
- Pollock, D. C., Van Reken, R. E., & Pollock, M. V. (2010). *Third Culture Kids: The experience of growing up among worlds: The original, classic book on TCKs*. Hachette UK. <https://doi.org/10.1016/B978-0-08-044894-7.01473-1>
- Porębski, A. (2010). Tradition and Modernity as Reflected in the Language Dimension of Multiculturalism. The Case of Switzerland. *Organon*, 42, 155-179.
- Saunders, G. (1988). *Bilingual Children: From Birth to Teens*. Multilingual Matters Inc., 242 Cherry St., Philadelphia, PA 19106-1906 (paperback: ISBN-1-85359-009-6; hardback; ISBN-1-85359-010-X).
- Schensul, S. L., Schensul, J. J., & LeCompte, M. D. (1999). *Essential ethnographic methods: Observations, interviews, and questionnaires* (Vol. 2). Rowman Altamira.
- Shakhovskiy, V. I. (2018). The cognitive matrix of emotional-communicative personality. *Russian Journal of Linguistics*, 22(1), 54-79. <https://doi.org/10.22363/2312-9182-2018-22-1-54-79>
- Yao, Y., Buchanan, D. L., Chang, J., Pecina, U., & Powell-Brown, A. (2009). Different drummers: International perspectives on multicultural education. *International Journal of Multicultural Education*, 11(2). <https://doi.org/10.18251/ijme.v11i2.161>