



The acquisition of written language within a second language

Challenges and support opportunities in written language acquisition of multilingual children using German as a second language

Stürmer, Verena¹

Abstract:

The acquisition of written language in a second language presents unique challenges for multilingual children, and children with migrant backgrounds who often struggle with reading competence due to limited proficiency in the majority language and varying degrees of support. These children face various specific phonetic, semantic, syntactic, and grammatical challenges during literacy acquisition, including difficulties with phoneme discrimination, vocabulary gaps, and complex sentence structures. To provide targeted support, it is essential to recognize the individual needs of multilingual learners. This includes integrating their first language into the learning process, utilizing digital media for phonetic practice, and fostering a positive learning environment. By addressing these challenges and implementing effective support mechanisms, educators can enhance the literary acquisition process for multilingual children, ultimately promoting their academic success and integration within both the educational system and society.

Keywords:

acquisition of written language, individual needs, multilingual children, German as a second language, reading competence

Introduction and Definitions

Elementary schools, as institutions for all children, reflect social reality of modern societies in their diversity. In such an educational setting, one can find children with very heterogeneous learning conditions and various social

¹ Senior Academic Councilor, University of Würzburg, Germany; Department of Pedagogy, Chair of Primary School Education; verena.stuermer@uni-wuerzburg.de

backgrounds, including students whose first language does not correspond to the language of the majority. These children face the challenge of acquiring written language, which is one of the key tasks in early grades, while not yet fully mastering the language itself.

National and international studies repeatedly indicate that educational success of students is not only related to their individual cognitive skills but also significantly influenced by their social and potentially migrant background (Berkemeyer et al., 2017; Stanat et al., 2022). Naturally, the group of children with a migrant background is very heterogeneous, and students bring a wide range of learning conditions, prior knowledge, skills, and personalities to school. Empirical results from international educational studies show that children from socially disadvantaged families, as well as children who do not frequently or not at all speak the majority language of the respective country at home, represent a group with special needs regarding reading competence (Stubbe et al., 2023). This applies especially when the migration background is coupled with low socioeconomic status (Wendt et al., 2020). A significant part of the competency differences between students with and without migrant background can be explained by socioeconomic status (Wendt & Schwippert, 2012; Wendt et al., 2017). In Germany both social and migrant-related disparities have intensified in recent years in school performance studies for elementary school-aged children (Ludewig et al., 2022; Stanat et al., 2022) as well as for older students (OECD, 2023). This is particularly concerning, as a large proportion of fourth-graders with migrant background examined in the International Primary School Reading Study (IGLU/PIRLS) have completed their entire elementary education within the German school system. First graders who are learning to acquire written language in a second language can therefore be regarded as a vulnerable group or “risk group” in Germany (Schulte-Bunert, 2015, p. 151) that requires specific support and assistance from teachers (Stürmer, 2025).

A second language, in contrast to a first language, is understood as language that is not learned from birth and/or early childhood but typically acquired after the age of three or upon entering social systems such as kindergarten or school. The acquisition of the second language occurs both in an unstructured manner in extracurricular, informal learning situations and (partially, but not necessarily) within the framework of targeted second language instruction (Ahrenholz, 2020). For students, this means that the second language serves both as medium of instructional communication as well as subject of second language acquisition processes (Kniffka & Siebert-Ott, 2023), such as in written language acquisition, which presents a high cognitive demand (Schulte-Bunert, 2015).

The following text will show learning conditions which multilingual children begin their written language acquisition with, and challenges they encounter during this process. Subsequently, fundamental principles and concrete additional support in written language acquisition of a second

language will be presented. Both challenges and support will be exemplified using German as a second language but can be also similarly applied to other second languages. The focus will be on early written language acquisition, where phonemic analysis is of particular importance, while also incorporating aspects of advanced reading and writing.

Learning conditions of multilingual children in literacy acquisition

for multilingual children, it is crucial to acquire proficiency in the language of school instruction. However, with the transition to school, the linguistic demands change for all children: a gradual shift occurs from everyday language (basic interpersonal communicative skills, BICS) to academic language (cognitive academic language proficiency, CALP), a language register required for academic success and literature (Cummins 2006), which presents a challenge even for many native-speaking children. In general, this is particularly problematic for children who had little or no access to academic language so far. For newly immigrated children, additional second-language challenges arise (Cummins, 2006). The learning preconditions for acquiring written language in a second language vary significantly within the group of multilingual children. They depend not only on their specific and nonspecific skills in literacy acquisition (Marx, 2007) but also, and crucially, on their linguistic knowledge and on the support they receive during language acquisition. Growing up with multiple languages does not necessarily lead to difficulties in the second language. However, as described above, multilingual children in many countries live in unfavorable socioeconomic conditions, which results in qualitatively and quantitatively different language exposure (both in first and second languages) within families and early childhood education settings (for Germany: Autorengruppe Bildungsberichterstattung, 2018). The learning conditions also vary significantly among children without a migrant background (Martschinke & Kammermeyer, 2003). These children acquire literacy in a language in which they have already gained numerous phonetic, semantic, grammatical, literal, and cultural experiences that are significant for learning to read and write. They also possess age-appropriate communicative competencies in the language of instruction and can generally understand the teacher's explanations without difficulty (Speck-Hamdan, 2018).

In contrast, the language skills in the second language among multilingual children are highly heterogeneous and influenced by factors such as the acquisition situation and biography, as well as the family's socioeconomic conditions (Marx, 2017; Speck-Hamdan, 2018). Some children already have good oral skills, can express themselves fluently in everyday language, and may have had literal (possibly academic language) experiences in the second language. On the other hand, there are children whose language skills are

significantly lower and who have only limited phonological, grammatical, semantic, and syntactic skills of the second language. For them, the language learning process and literacy acquisition occur simultaneously, and even everyday communication in the classroom presents a considerable challenge. Nevertheless, these children also have relevant skills for literacy acquisition: they understand the symbolic of language and have knowledge of writing (albeit possibly with different graphemes and writing directions). Additionally, they have usually gained literacy experiences in their first language (for instance, through nursery rhymes, songs, as well as tales or stories), and they are implicitly familiar with the phoneme inventory, grammar, and syntax of their first language. Furthermore, they dispose of an age-appropriate vocabulary and a phonological awareness in this language. However, these skills are developed in a language that is not or only partially relevant for literacy acquisition in the second language and which differs in phonological system, prosody and many other linguistic aspects from the main language. Therefore, the existing linguistic skills of children, as well as their knowledge of phonological awareness in their first language, can only be utilized to a limited extent for learning literacy in the second language.

Challenges of literacy acquisition in a second language such as German

Due to its complexity, literacy acquisition is a challenge for many children, particularly for those learning it in a second or third language, as they encounter additional linguistic difficulties. These challenges vary depending on the first language and its linguistic similarities and differences with the second language. Some children may initially face challenges in terms of visual discrimination when they are accustomed to a different reading and writing direction and different graphemes other than their everyday environment (Ehlers, 2013; Siems & Weis, 2014). However, these children will generally also face graphemes of the second language in their daily lives, and the reading direction will be quickly internalized.

Phonetic challenges likely arise in the realm of phonological information processing. While empirical findings indicate that in comparison to monolingual children, multilingual children, due to their exposure to the phonetic systems of multiple languages, possess more pronounced competencies within general phonological awareness (Marx, 2007; Wildemann, 2022), this evidence is yet not conclusive in this regard (Marx, 2017). The results are particularly dependent on the age and first language of the children, with advantages noted primarily for older children learning a foreign language (Hesse, Göbel & Harig, 2008). The transfer of knowledge regarding phonological awareness from the first to the second language may not be transferred when the phonetic inventories of these languages differ (Marx, 2017). Depending on the methodological approach, the focus at the beginning of literacy

acquisition may be on syllable construction (in predominantly linguistically oriented approaches) or the relationship between phonemes and graphemes (in phonetic approaches) (Schründer-Lenzen, 2013). Thus, children face the challenge of discerning and storing individual syllables or phonemes of their second language in their auditory memory. This extraction of linguistic content is initially difficult for language learners, as the phonetic structure of the first language remains an active filter for a long time. If the phonetic differences between the first and second language are significant, beginners may initially only discern the phonetic elements that are familiar to them from their first language, such as sounds like /m/ or /l/, which occur in many languages (Siems & Weis, 2014). Phonemes that are absent in the first language may be difficult to discriminate from the spoken language (Speck-Hamdan, 2018). In German, this applies, for example, to umlauts, which are not known in many languages and therefore can be challenging for beginners to percept and pronounce. Additionally, they must be distinguished between long and short sounds: <ä> as [ɛ:] or [ɛ], <ö> as [ø] or [œ], and <ü> as [y:] or [y]. Sounds that are either not pronounced or not distinguished in the children's first language, or whose distinction is not semantically relevant, also cause difficulties. For instance, children with Arabic as their first language struggle to differentiate between [i:] / [i] and [ɛ] / [e:], while French-speaking children have difficulty with the correct pronunciation of [h]. In many languages, unlike in German, vowel length is either not semantically distinctive or only short vowels exist. The distinction between long and short vowels in words like "*Miete*" and "*Mitte*" (which is orthographically marked in writing but not perceptible in speech) is therefore only noticeable with a lot of practice. Words with consonant clusters, such as "*Strumpf*" or "*Herbstblatt*", or the grapheme <ch>, whose pronunciation depends on the preceding vowel, are also challenging: [x] after vowels <a> and <u> as in "*Bach*" or "*Buch*", [ç] after the vowels <i> and <e> as in "*Licht*" or "*Specht*". At the beginning of a word, there are also regionally or dialectally different pronunciation variants of that grapheme, such as for the word "*Chemie*", which can be pronounced as [ke'mi:], [ʃe'mi:], or [çe'mi].

The knowledge of syllables that are relevant to many literacy approaches is also often more challenging for children with a different first language than for native speakers, as they initially unconsciously transfer the prosodic rules of their first language to the second language. This may result in incorrect syllable division or different emphasis on the syllables of a word while reading. This complicates word recognition, as the pronunciation appears unfamiliar and cannot be retrieved from the mental lexicon. The possibly still lacking grasp of prosody and accent structure of the second language among beginners can therefore lead to difficulties in reading (Wildemann, 2018). The phonetic challenges are further exacerbated by the ambiguous relationships between phonemes and graphemes in German as a sound-oriented alphabetic script. German has about 26 graphemes (plus

the umlauts ä, ö, ü and the <ß>), corresponding to 40 phonemes. This results in many graphemes having different phonetic variations that children must recognize. For example, the “E” in “*Ente*” is pronounced quite differently ([ɛ] in /[ɛntə]) than the “E” in “*Esel*” ([e:] in [e:.zəl]) for the initial sound of the word; the “e” in the second, unstressed syllable of the word “*Esel*” is hardly audible in German: [ə]. Conversely, many phonemes have numerous spelling variants, particularly in distinguishing between short and long vowels and consonants (Mayer, 2022). Mastery of the grapheme-phoneme and phoneme-grapheme correspondence is a challenge even for native-speaking children, especially in orthography. For second language learners, this challenge is heightened due to phonetic deviations from their first language.

Another difficulty arises at the semantic level: The vocabulary in the second language is often significantly limited for many children compared to their age group and is reduced to everyday experiences, which is crucial for the literacy acquisition of multilingual children (Marx, 2017). When reading, some students may not understand the meaning of a word, so neither the word meaning nor the context can support their comprehension of the text. Vocabulary gaps may initially go unnoticed in children who are proficient in oral communication, as the texts contain simple words and phrases due to their still limited reading competence. However, by the second half of the first grade, texts become more complex, and more challenging words such as “*zerkleinern*” (finely chop), “*sausen*” (dash) or “*löffelt*” (eat with a spoon) (Namour, 2023, pp. 72, 79, 96) appear, as well as technical terms in interdisciplinary reading texts like “*Frühblüher*” (early spring bloomer), “*säen*” (sow), or “*keimen*” (sprout) (Namour, 2023, pp. 95, 110, 111). Even a small percentage of unknown words (3-5%) can cause difficulties in understanding a text (Pigada & Schmitt, 2006). Additionally, there are words in German that prove particularly challenging for all learners, regardless of their first language. This includes compounds like “*Pausen/brot*” or “*Wasser/farb/kasten*”, which can consist of two, three, or in rare cases more words in German. For reading comprehension, separable verbs also pose a challenge, as in German, the prefix of a verb that provides further explanation often appears at the end of the sentence. This leads, especially with inserted temporal and locational adverbials, to complicated syntactic structures so that the understanding of a sentence is difficult, particularly when some parts of the sentence are semantically unclear: the following sentence “*The father picks up his children (every day after work in a good mood at around 3pm by bike from the after-school care centre in Schulstraße).*”, in German: “*Der Vater holt seine Kinder (jeden Tag nach der Arbeit gut gelaunt gegen 15h mit dem Fahrrad in der Schulstraße aus dem Hort) ab.*” (The father picks up his children (every day after work in a good mood at around 3pm by bike from the after-school care centre in Schulstraße).) for example requires good concentration and grammatical knowledge to understand the meaning of “*abholen*” as there is a great distance between the prefix “*ab*” and the verb “*holen*”.

If the children's skills at the grammatical level are still incomplete at the beginning of literacy acquisition, this initially goes unnoticed and is uncritical for early reading, as very simple, short sentences are read at first, such as "*Alle lesen mit Opa.*" (Everyone is reading with grandpa) or "*Papa ist mit Nino im Sessel.*" (Dad is in the armchair) (Namour, 2023, p. 33). However, as the texts to be read become longer and the sentences more complex, a lack of grammatical knowledge can significantly impair reading comprehension, especially when accusative and dative objects cannot be distinguished, subject-verb agreement is not fully understood, or complex subordinate clauses with multiple insertions remain unclear as one can see in a randomly selected reading text the fourth grade: "*Schaut man sich die Arktis auf dem Globus an, kann man kaum glauben, dass dort, sozusagen am oberen Rand der Erde, Menschen leben.*" (If you look at the Arctic on a globe, it's hard to believe that people live there, sort of at the upper edge of the earth) (reading test, fourth grade, German primary school). With a lack of knowledge of common grammatical structures of the second language, reading speed decreases, and it takes longer to achieve reading fluency, which is highly important for reading comprehension. When children have no expectation of how a sentence should grammatically end, understanding a sentence or text remains challenging. Typical difficulties of German grammar are articles (which require gender, number, and case agreement), the internationally rather unusual word order in German (with the verb in second position in main clauses), various possibilities for plural formation, and homophonic forms of personal and possessive pronouns, which can complicate sentence comprehension. Grammar also has implications for spelling and syntax, so grammatical knowledge is required not only for reading but also for writing, especially longer texts (Wildemann, 2018). Furthermore, knowledge of the syntactic rules of the second language is necessary for comprehension while reading, which is why beginners also face challenges at the syntactic level. An expectation of sentence structure improves reading flow, as not every single word needs to be read.

A central challenge in German, in addition to the previously mentioned verb placement and bracket structure due to separable verbs, is the formation of the perfect tense as well as the different syntactic rules in main and subordinate clauses: In simple main clauses, the verb stands in second position: "*Wir gehen heute ins Rathaus.*" (*We are going to the town hall today.*) Through rearrangements that do not fundamentally change the sentence but do alter its content focus, the verb remains in second position, but the subject and verb swap places (inversion): "*Heute gehen wir ins Rathaus.*" (*Today, we are going to the town hall.*) In subordinate clauses, however, the verb appears at the end: "*Ich habe meiner Schwester erzählt, dass wir heute ins Rathaus gehen.*" (*I told my sister that we were going to the town hall today.*) The challenges for children learning German as a second language in literacy acquisition are diverse due to the significant importance of linguistic skills. Linguistic skills are relevant not only in early literacy acquisition but also

have negative effects on advanced reading and writing skills. Students must pay more attention to the linguistic content of a text, leaving them with fewer cognitive resources for a deeper understanding of the content or for a more thorough processing and development of a writing idea (Marx & Steinhoff, 2017). Children who have not yet fully mastered the acquisition of their second language often perform worse than monolingual children, especially in the subject of the second language (Stanat et al., 2022; Mc Elvany et al., 2023). The process of learning to read and write is more complex and takes more time for them. Additionally, their performance improves only slowly, which can be demotivating, especially for younger children with low frustration tolerance. Even when students have fundamentally understood reading techniques and can translate the depicted graphemes into phonemes, they frequently struggle to understand what they have read due to the challenges at the semantic, syntactic, and grammatical levels mentioned above. This can lead to motivational problems due to associated experiences of failure.

Supporting multilingual children in literacy acquisition: principles

Due to the diverse challenges faced by second-language children in literacy acquisition, targeted support for these children is essential (Marx, 2017; Stürmer, 2025). Ideally, comprehensive support for oral skills should occur even before formal literacy instruction in the preschool sector (Kalkavan-Aydin, 2022), where precursor skills for literacy acquisition can be developed. Digital media, with their potential for multimodal learning, offer specific advantages in this context (Knopf & Eckle, 2020; Kirschhock & Renner, 2022). Despite the specific demands, the literacy acquisition of multilingual children does not require a different or separate didactic approach, as the mechanisms of acquisition in reading and writing are fundamentally the same for both monolingual and multilingual children (Becker-Mrotzek & Jambor-Fahlen, 2017). This is particularly important given that most children with a migrant background, including those with limited language skills, are educated in regular classes in Germany (Massumi et al., 2015). However, it is crucial to consider the specific prerequisites of these children and one should not assume the standard case of monolingual literacy acquisition, as is often the case in many methodological concepts (Speck-Hamdan 2018). Therefore, language support should be a guiding principle in all subjects to ensure comprehensive and continuous language promotion (Gogolin, 2011; Kurtz et al., 2015). Teaching and learning situations must be designed as clear and comprehensible as possible, for example through visualizations, gestures, demonstrations, indications, naming or repetition (Speck-Hamdan, 2018). A precise assessment of the individual literacy skills is beneficial in this regard. Particularly for children with limited German proficiency, it is essential to ensure that actual skills, rather than general language

abilities, are tested, so that task requirements are not simply unfulfilled due to vocabulary issues. If children have very limited knowledge of the second language, a basic diagnostic assessment based on native language vocabulary (e.g., to determine initial phonemes, syllables, or rhyming words) using artificial intelligence and translation programs can be effective. Children's already acquired knowledge in their first language can thus be consciously recognized and valued, even for less prestigious languages. Furthermore, for more advanced students, systematically incorporating their first language into the language acquisition process appears promising (Wildemann, 2022), as this can stimulate metalinguistic reflections in various languages (Oomen-Welke, 2014; Topalovic & Michalak, 2015). Additionally, the first language is an important part of a child's identity, which can be appreciated by a significant person in the child's life (Marx, 2017). It is therefore crucial to make the children's first languages visible and tangible in the classroom as well as in everyday lessons, for example through multilingual posters or labels on everyday objects, as well as the marking of the children's countries and languages of origin on a world map in the classroom. Additionally, the collective learning of songs and rhymes in the children's various languages and a multilingual greeting ritual at the beginning of the day, which incorporates all of the children's first languages, can help acknowledge and value these languages. Naturally, no teacher can be expected to learn the basics of the many first languages present in the classroom. However, literature that provides an overview of various languages commonly spoken among immigrants can help identify key similarities and differences between each first language and German in areas such as phonetics, semantics, grammar, and syntax (e.g., "The Multilingual Classroom" by Krifka et al., 2014; Einhellinger, 2023). A short inquiry using artificial intelligence can also provide fundamental, yet crucial differences between individual languages and their implications for respective learners. While these insights may be significantly reduced and still unsatisfactory for linguists, they are often sufficient for everyday teaching and more effective than much more ambitious demands that are not implemented in practice. Possible prompts, exemplified for newly arrived Ukrainian children, could include "What are the key phonological differences between German and Ukrainian?" or "Which phonemes are particularly challenging for Ukrainian German learners?"

According to the learning conditions, support should fundamentally relate to specific resources and needs of children, regarding not only their language skills in the second language but also their age and associated abilities, such as language reflection and reading competence. In this way, a learning environment can be created, where reading and writing are perceived as meaningful, enjoyable, and worthwhile (Speck-Hamdan, 2018). This is especially true for a high proportion of children from less educated backgrounds who may have had fewer positive literacy experiences.

Specific support for multilingual children in literacy acquisition using German as a second language

At the phonetic level, students need support until they can articulate all sounds correctly or discern them from spoken words and sentences, allowing them to store and retrieve these phonemes accurately in their mental lexicon. When introducing letters, particular emphasis should be placed on acoustic analysis, where multimedia e.g. tablets with audio files can be used so that sounds can be listened to repeatedly without a language model (Riegler & Schmitt, 2020). For specific phonemes that differ from respective first language, targeted listening and pronunciation exercises are beneficial. This could involve consciously focusing on long and short-spoken vowels, non-meaning-distinguishing, unfamiliar, or differently pronounced phonemes, such as the sound [ts] for the letter <z> or the previously mentioned phonetically distinct realization of <ch>. Methodologically, this could be implemented through listening tasks where children perform a gesture for specific sounds or accompany long and short-spoken vowels with different gestures. Working with phonetically similar words, where the respective sound is highlighted through exposure, is particularly suitable, especially when a new letter is introduced in the first-grade literacy acquisition. For distinguishing [z] (in the letter “s”) and [ts] (in the letter “z”), this could be achieved by contrasting the phonetically similar words “Zahn” (tooth) and “Sahne” (cream), or in encountering the voiceless glottal fricative [h] through the minimal pair “Dose” (can) and “Hose” (pants) or “Nase” (nose) and “Hase” (rabbit). However, finding simple, semantically understandable words for children regarding minimal pairs with long and short-spoken vowels is not easy. For instance, “Bett” (bed) is certainly a familiar term for elementary school children, while its counterpart “Beet” (bed/ patch) is not. In songs, rhymes, and speaking games that can be accompanied by movements, so that a sense of the prosody of the second language can be developed, as the clear rhythm and melody make it easier to grasp and remember the emphasis and flow of speech, especially when supported by movement. Therefore, recurring but also new songs and rhymes should fundamentally be part of the initial instruction in German as a second language. Almost all students enjoy singing and speaking together in chorus, and they experience less fear of making mistakes due to social support (Kuhl et al., 2003; Ginsburg-Block et al., 2006).

Furthermore, an introduction to the syllable structure of German can be beneficial, especially since this is relevant for orthography and engaging with syllables can provide a sense of the phonological structure of the language. However, this requires a certain level of proficiency in the second language due to the higher degree of abstraction. Methodologically, the challenges at the phonetic level can be addressed particularly using digital media. Especially in early literacy acquisition, when students face the task

of identifying or analyzing phonemes, digital supplements to worksheets or workbooks (e.g., on tablets or in low-threshold digital supplements to workbooks) or working with apps can be effective: phonemes, syllables, and words can thus be repeatedly heard and spoken correctly without an immediate language model (Berkemeier et al., 2017). Similarly, the use of digital pens (Glotev & Krupp, 2020) can facilitate this process. Many newer primers and other materials for literacy acquisition also have digital supplements that support children, such as listening to and reading along with texts via e-books or accessing low-threshold digital practice formats with speech output through QR codes on smartphones or tablets without purchasing the e-book (Kuhn et al., 2024). Existing commercial or free apps can also be utilized or developed as appropriate, although a quality check must be conducted beforehand (Knopf, 2020).

To support children at the semantic level in word, sentence, and text comprehension, awareness of this challenge is already an important condition for teachers. Vocabulary acquisition is generally a tedious task (Apeltauer, 2020). Naturally, texts should also contain unknown words to continuously expand the vocabulary of all children. However, every teacher should be aware that some children do not understand all words. Particularly as the texts become more demanding and contain academic language terms, not only children with a second language but also children from socioeconomically disadvantaged backgrounds face challenges in understanding the text, as they have not yet acquired the corresponding linguistic codes (Cummins 2006). Verbal definitions of words prove particularly challenging, especially since by the second grade, 55% of the words that children read in school are verbally defined (Apeltauer, 2020). Clarifying unknown words should therefore be a central, mandatory, self-evident component of every (reading) lesson, and particularly for reading comprehension, key words should be conceptually clarified before the actual reading exercise to avoid impairing text understanding. The simplest clarification certainly involves visualization, which can be displayed alongside the text through digital media. However, this is hardly possible for verbally defined, abstract words. Here, the first language of the children can be utilized, either through the teacher (with the help of AI) or through children who share the same first language. Language beginners and their classmates can thus experience that they do not fundamentally fail to understand a word, but rather have not yet learned the meaning of the word in a particular language. It is fundamentally important not to conduct vocabulary work unsystematically and rely on children to infer the meaning of a word from context but to direct learners' attention to a new word (Einhellinger, 2023). Furthermore, if vocabulary expansion is to be sustainable, the new vocabulary must not only be introduced and explained but also embedded and connected in context, repeated multiple times, actively used, and written down for older children (Apeltauer, 2020). Here, choral speaking and the targeted consideration of tone and rhythm, as

well as memorization exercises, appear to be effective (Einhellinger, 2023), not only for younger children.

Another relief for children with German as a second language can, at least in the initial phase, be the color-coded marking of related word parts (such as the verb bracket consisting of root and prefix or suffix). At the grammatical level, it seems beneficial to always name words in everyday classroom life with articles and to accompany the gender of a word in spoken language as well as when introducing new words, for example, through hand gestures (in German, the hand signs for the well-known children's game "Rock, Paper, Scissors": *der Stein, die Schere, das Papier*). Hand signs have the advantage over frequently used colors that they can also be used in oral language and therefore are also suitable for younger learners, while colors often are used in primary school grammar instruction to distinguish between word classes or sentence constituents. Furthermore, color-coded markings can highlight personal pronouns and corresponding subjects in initial small reading texts for language beginners in German classes to facilitate connections within the text and thus overall text comprehension. Additionally, in reading texts, dative and accusative objects could be color-coded. This is particularly useful when the different cases are explicitly discussed in supplementary language support classes, allowing reading and grammar competence to complement each other. However, these markings make sense especially for elder children who have a basic level of language awareness and reading skills. Similarly, various plural formations can be collected from reading texts or, for younger children, oral examples. In such exercises, there are always opportunities for a contrastive and language-reflective comparison of different first languages, even for younger children who can try to collect different forms of plural formations in their first languages (Topalovic & Michalak, 2015; Petersen & Kilian, 2017). A basic assessment of relevant rules in the students' first languages can be achieved through introductions to the children's first languages as in the publication by Krifka et al. (2014, see above) or through a simple inquiry using artificial intelligence for many languages without unreasonable effort.

To address challenges at the syntactic level, it is advisable to initially avoid complex sentence structures in reading texts for language beginners, while the level of difficulty can gradually increase. In first grade, such an increase from simple to complex occurs due to the initially insufficient reading competence of all children: sentences at the beginning of literacy acquisition are generally simple main clauses. However, by the end of the first grade, texts become more complex and contain initial subordinate clauses that become increasingly difficult as children's reading competence improves. Here, particularly in small group work, a (color-coded) marking of related word parts (e.g., which verb refers to which subject) appears to be a sensible support.

Finally, maintaining children's motivation to learn to read and write in the second language despite specific challenges is a central point. It is essential to consciously recognize and appreciate the existing skills of children in their first language. To prevent language-related experiences of failure and frustration from solidifying and leading to decreased motivation, experiences of competence are of central importance, following the self-determination theory of Deci & Ryan (2000). Children facing specific challenges can experience that they can (step by step) manage the complex task of literacy acquisition. For this, it is necessary that they are given tasks that correspond to their concrete learning conditions so that they can experience success. Digital media promise further opportunities in the future through the possibility of multimedia access (and thus the integration of the phonetic aspect essential for reading), as well as intelligent tutoring systems, even though these are currently not sufficiently utilized (Böhme & Munser-Kiefer, 2020).

Conclusion

The literacy acquisition process for multilingual children is fraught with unique challenges that stem from their diverse linguistic backgrounds and varying socioeconomic conditions. The learners often face significant hurdles in mastering the complexities of written language, which are compounded by their limited exposure to the language of instruction and the cognitive demands of simultaneous language and literacy learning. The empirical evidence highlights that these children not only struggle with phonetic and grammatical aspects of the second language but also encounter difficulties in vocabulary acquisition and reading comprehension, which can lead to motivational issues and hinder their overall academic success.

To address these challenges, it is imperative that educators implement targeted support strategies that recognize and build upon the existing linguistic skills of these students. This includes fostering a learning environment that values their first languages, utilizing digital media for enhanced engagement, and providing systematic vocabulary and grammar instruction. By adopting a comprehensive approach that integrates language support across all subjects, teachers can create meaningful and enjoyable literacy experiences empowering multilingual learners.

It is essential for educational systems to prioritize the development of inclusive pedagogical practices that cater to the needs of multilingual children. Continued research and innovation in teaching methodologies, alongside the integration of technology, will be crucial in enhancing literacy outcomes for these learners. Ultimately, fostering a supportive and responsive educational environment will not only facilitate the acquisition of written language but also contribute to the broader goal of educational equity in increasingly diverse classrooms.

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