

Translation, Readability, and Readership Levels in STEAM Children's Books: A Theoretical Review

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ABSTRACT

Readership classification methods are frequently used to identify the linguistic features appropriate for children at different levels of reading development. Beneath these criteria are theories of increasing complexity and the belief that texts for younger readers should use simpler language. But findings from research into language for children present a more ambivalent picture. While some grammatical structures are difficult for children, others can be understood and produced relatively early as they grow up. Studies of translated works in Indonesia have also shown that texts that may not be fully consistent with official readership criteria nevertheless remain accessible to their intended readers. These observations raise questions about our assumptions regarding the connections among linguistic complexity, readability, readership, and translation. The following article aims to conceptualize how these concepts relate through a theoretical survey of scholarship in translation studies, children's literature, readability studies, and child language acquisition. Based on foundational and contemporary studies in these areas, the review investigates how we conceptualize readability through the lens of linguistic complexity with respect to children's language competence, and how these frameworks inform readership typologies and translation practices. The article isn't concerned with analysing a specific translated text, but rather with the theoretical assumptions that guide choices about age-appropriate language and readability in children's books. The review reveals three significant conclusions. First, linguistic complexity is not necessarily homogenous, because various grammatical forms emerge at differing speeds and impose differing stresses on children's readers. Second, readability is more than linguistic simplification; comprehension is influenced by contextual support, prior knowledge, and the reader's capabilities. Third, readership levels should be understood as pedagogical frames rather than static measures of children's linguistic capacity. These findings suggest that decisions about children's literature translation, for instance, STEAM storybooks, are not particularly intuitive regarding age and linguistic difficulty. Readability is not just a function of textual

simplicity, but of the interplay among textual features, children's increasing language competence and translators' attempts to navigate both accessibility and the educational aspects.

Keywords: children's literature translation; readability; readership levels; linguistic complexity; STEAM storybooks.

INTRODUCTION

The use of readership levels has become a standard practice in children's publishing. Children's literature has been categorized by age level, and each type is associated with the expected content, sentence structure, and text complexity for children. In short, the underlying principle is rather simple: children should read texts that align with their language skills. The problem, however, is that the relationship between language complexity and children's comprehension often isn't as clear-cut as these classification systems imply. This is borne out when examining how actual reading practice is set up in accord with guidelines for readership. In Indonesia, for instance, graded books are supposed to conform to several different linguistic criteria set by their various readership levels. Yet, we know from a handful of studies of translated children's books that texts do not conform to the criteria but can nevertheless be understood by the readers intended for them (Putri, 2024; Mahbub, 2025). Such findings prompt a more basic question: how do readership classifications decide whether a given linguistic form is appropriate for certain groups of children but not for others? This question is far from easy to answer. Research on child language development provides no one way to define linguistic complexity for children.

Research indicates that the grammatical complexity of some phenomena is challenging for young children (Rakhlin et al., 2016) and that certain complex constructions can be processed by children many years ahead of expected (Blything et al., 2015; Pratiwi et al., 2020). These results challenge the notion that linguistic complexity can be conveniently mapped to age-based readership categories. The question has important translation implications. Translators of children's literature consistently make choices regarding whether linguistic forms should be retained, dumbed down or recast. This is frequently defended on the grounds of readability and the abilities of target readers. But if the assumptions about readership classifications in translation remain obscure, if not contested, the grounds of those translation decisions are no less uncertain. It's especially pertinent to the translation of STEAM storybooks, as translators need to navigate the complexities of not just language but also the exchange of scientific ideas and specialized knowledge. Studies on the subject have provided important information on translation quality, readability, and various translation techniques used in children's fiction. Simultaneously, research on child language acquisition has created a growing body of evidence on children's

comprehension of grammatical complexity.

Nevertheless, these dialogues have rarely converged under a single theoretical umbrella. As such, little is theorized about the relationships between readership levels, linguistic complexity, readability, and translation. This article analyzes that connection through a theoretical review of research in Translation Studies, children's literature, readability studies, and child language acquisition. Instead of whether a particular translation is readable, the article examines how readability is understood and how that understanding has led to preconceived ideas about children, language complexity, and translation.

METHOD

This article originated from an issue that frequently arose in translated children's literature studies conducted in Indonesia. On the one hand, readership guidelines prescribe specific linguistic attributes for each reading level. For further studies, it is demonstrated that translated texts don't necessarily conform to the prescribed list of reading features, as they are relatively easy to read even for child readers (Putri, 2024; Mahbub, 2025). Given the inconsistency between these two observations, I critically reviewed the assumptions behind readability, linguistic complexity, and readership classification. To address this issue, the article draws on literature from multiple domains that are typically discussed separately. Studies of translation in children's literature have shed light on how translators negotiate the language of children's reading (Shavit, 1986; Oittinen, 2000). Readability studies offer reflections about what makes a text accessible to the intended audience, while child language developmental research provides information about children's real language skills (Blything et al., 2015; Rakhlin et al., 2016; Pratiwi et al., 2020). There are also policy papers on graded reading materials included, which describe how books are classified by readership type. The review is not intended to encompass all studies of children's literature and readability. Rather, it concentrates on works that answer the same question from multiple angles: what linguistic features can be justified in the context of children at different stages of development?

The purpose of the review is not simply to repeat Snyder (2019), but to explore how different strands of research have addressed the same topic and to what extent their findings are convergent. The rest of the paragraph focuses on how linguistic complexity has been studied in the literature of readability, in readership guides, in the literature of child language, and in Translation Studies. Differences and convergences in the discussion of these areas are subsequently reviewed to reveal what assumptions have supported and hindered translation practices in children. Indeed, the article adopts a theory-building orientation similar to that presented by Jabareen (2009) and Jaakkola (2020), merging diverse concepts from disparate fields into a more consistent formulation as they discuss a single overarching

phenomenon. The proposed model of readability is not a groundbreaking model per se – the article seeks to elucidate its conceptual relationships with linguistic complexity, readability, readership levels, and translation. Clarification is needed before testing evidence for age-appropriate language use, legible translations, or readership categories.

FINDINGS AND DISCUSSION

A. Linguistic Complexity and Children's Language Competence

The notion that younger readers require simpler language is widely accepted in discussions of children's books. This assumption is also reflected in many readership classification systems, which use vocabulary and sentence structure to distinguish one reading level from another. At first glance, the logic seems reasonable. If children are still developing their linguistic abilities, texts intended for them should avoid structures that are considered too complex. Yet research on child language development suggests that the issue may not be as straightforward as it appears.

One reason for this is that linguistic complexity itself is not a single, clearly bounded phenomenon. Different grammatical structures place different demands on children, and those demands do not always develop uniformly. Rakhlin et al. (2016), for instance, found that children continue to experience difficulties with certain relative clause constructions, particularly those involving post-modifying structures within noun phrases. Their findings indicate that some forms of syntactic complexity remain challenging even after children have acquired many other aspects of grammar.

At the same time, other studies point in a different direction. Blything et al. (2015) reported that children between three and seven years old were able to interpret temporal relations expressed through complex sentences. Although their performance was affected by factors such as memory load and conjunction placement, the findings suggest that complexity does not automatically lead to incomprehension. What appears to matter is not only the structure itself but also how information is organised and presented.

A similar pattern can be observed in studies of children's language production. Examining conversations involving five-year-old children, Pratiwi et al. (2020) found evidence that children were already capable of producing simple relative clauses. Likewise, Izzati et al. (2019) showed that Indonesian children writing short stories frequently employed complex sentences, despite the relatively simple noun groups found in their texts. These studies are important because they demonstrate that children are not merely passive recipients of linguistic input. They actively use forms of grammatical complexity in both spoken and written language.

Taken together, these findings complicate the common tendency to equate linguistic complexity with linguistic difficulty. A structure that appears complex from an adult linguistic perspective may not necessarily be inaccessible to children, while other constructions may continue to pose challenges despite appearing relatively simple. The evidence therefore suggests that children's linguistic competence develops unevenly across different aspects of grammar rather than through a linear progression from simple language to complex language.

B. Readability and Linguistic Simplification in Children Stories

One such assumption in writing about the classics of children's books is that the language in the texts becomes simpler. This assumption appears in many readability formulas that use sentence length and vocabulary difficulty as markers of difficulty (Klare, 1963; Chall, 1988; Dubay, 2004). It also occurs in teaching strategies that typically use shorter sentences and more familiar vocabulary for younger readers than for older readers. Thus, readability is typically viewed through the lens of linguistic simplification. Translation studies also express this view. Nababan (2003) contends that good translation in translation research needs not only to transfer meaning accurately but also to be straightforward for target readers. Similarly, Nababan et al. (2012) emphasize readability as one of the primary parameters of translation quality alongside accuracy and acceptability. According to this paradigm, a translation is considered readable if the intended reader can read its words, phrases, clauses, and sentences without much challenge. Such definitions suggest that language is a deciding indicator of the text's comprehensibility to the final recipient. But the relation between simplicity and readability is not always as simple as it looks. Readability is not entirely a product of language features. While shorter sentences and well-known vocabulary may allow for easier reading, existing research indicates that readers must have their own attributes before getting anything done. Chall (1988) highlights that readability consists more in readers' features than in mere text description.

Likewise, Mesmer (2008) contends that reading difficulty depends not only on language but also on readers' background knowledge, literacy experience, and motivations. Consequently, texts with great linguistic difficulty can still be read, and texts without difficulties could remain difficult for certain readers. Child language research also highlights the tenuous assumption at the heart of the claim that linguistic simplification will naturally make things easier to read. Blything et al. (2015) found that when the relations were temporally constructed with familiar patterns, children between the ages of three and seven were able to understand the temporal relations that occur within complex sentences. Similarly, Pratiwi et al. (2020) found that even simple relative clauses are learned in routine communication in 5-year-old children. Izzati et al. (2019) also uncovered the appearance of complex sentence types in Indonesian children's literary stories. These findings imply that some grammatical complexity might already reside in children's linguistic competence at relatively early ages. But not all complex structures are processed as a single unit. Rakhlin et al. (2016) found that relative clauses within noun phrases persisted, leaving children with a significant challenge. This implies that you can't categorize linguistic complexity into a single category. Readers differ depending on the structure they use, and they are affected by familiarity with the structure, by the context in which it occurs, and by the processing load. So it is hard to

claim that readability can be reduced to sentence duration and grammatical difficulty. These, taken together, reveal that readability is about far more than linguistic simplification. Understanding vocabulary and sentence structure may affect reading difficulty, but they may not affect comprehension by themselves.

Readers enter the reading world with their own linguistic knowledge, experiences, and needs as well as their personal values and expectations of what reading entails (Mesmer, 2008; McNamara et al., 2014). This observation is important, particularly in the case of children's fiction translation, to ensure translators' trade-offs in balancing what is readable, among other things (accuracy, instructional aspect, and narrative coherence), with the degree of narrative. Accordingly, reading is perhaps more readily captured by the reader's competency as a reflection of a connection between textual features and reader competence, which results in the reader and text, not as a by-product of linguistic simplicity in isolation.

CONCLUSION

This article has analyzed the assumptions underlying the relationships among readership levels, language complexity, readability, and the translation of children's literature. The discussion indicates that these ideas are often correlated. Linguistic complexity is sometimes taken to imply greater reading difficulty; readability tends to relate to linguistic simplification; and readership levels are frequently inferred from measures of children's language capabilities. Yet, the literature discussed in this article reveals that the associations between these variables are much more intricate than those assumptions would suggest.

These findings indicate that linguistic complexity cannot be a monolithic, uniform phenomenon. Accordingly, varying grammatical structures seem to develop at different speeds and have different requirements on child readers. Similarly, readability cannot be derived from a text's features, as comprehension develops over the course of discourse and in the context of readers' linguistic background and cognitive resources. Therefore, the concept that increasingly complex linguistic forms can be systematically assigned to ever-increasing readership levels becomes increasingly difficult to sustain. This is particularly relevant for the translation of STEAM storybooks. When readership classifications are seen as a stable reflection of children's abilities, translators may be encouraged to simplify texts from the outset, based on the language. This simplification can make things a lot easier at times, but can also lose the depth of language, the conceptual richness, and the teaching that happens in STEAM literature.

Hence, readability should not simply be looked at as a consequence of linguistic simplification; rather, it must be interpreted as the outcome of language relations, contextual conditions, the reader's competence and translations. Indeed, readership levels can be used for more constructive

purposes as pedagogical frameworks than definitive measures of children's language competence. Although they are still great for organizing texts and helping children learn to read, they don't completely determine what children can and cannot understand. To understand readability in translated children's literature, therefore, calls for a wider perspective that takes not only textual dimensions into account but also the dynamic interplay among children, language, and meaning making.

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