

Vol:4 Issue: 13 pp: 1-16

**JEL Codes: I20, I29**

LAN, Y. & RASHID, H. (2023). "The Psycholinguistic Change Taking Place in Inattentive Education in the Context of English Learners". *International Journal of Social Science, Innovation and Educational Technologies (Online)*. Vol:4 Issue: 13 pp: 1-16

**Keywords:** *inattentive education; inattentive multilingual learner; English learner; literacy*

**Article Type** Review Article

## **The Psycholinguistic Change Taking Place in Inattentive Education in the Context of English Learners**

**Arrived Date**  
20.10.2022

**Accepted Date**  
23.12.2022

**Published Date**  
31.01.2023

**Yu Lan <sup>1</sup> & Md. Harun Rashid<sup>2</sup>**

### **ABSTRACT**

The goal of this review of the literature is to show the arguments in favour of thinking of inattentive children as "English learners," to look at what those ideas mean for education, and to suggest directions for future research. The term "English learner" is looked at from three different angles in relation to inattentive children: how it applies to inattentive children whose first language is American Sign Language, how it applies to inattentive children whose parents speak a language other than English, and how it applies to inattentive children who don't have much access to their parents' spoken English. Recent research from linguistics and neuroscience on the effects of not being able to speak a language is presented and thought of in a way that we call the "psycholinguistic turn" in inattentive education. The effects of teaching signing inattentive children how to read and write are looked at, with a focus on the idea of a "bridge" between knowing sign language and being able to read and write from print. Lastly, some good directions for future research are given.

### **INTRODUCTION**

The goal of this review of the literature is to show the arguments in favour of thinking of inattentive children as "English learners," to look at what those ideas mean for education, and to suggest directions for future research. According to (Holcomb, 2010), the word "inattentive" will be used to describe people whose hearing is bad enough that they need special services, which are usually given through inattentive education. The word "Inattentive" will only be used to talk about Inattentive culture. From now on, the term "English learner" will only be used when referring directly to how the federal government uses it. We will instead use the terms "bilingual" or "multilingual," which recognise that children have skills in more than one language (García, 2009). Since critical literacy work has shown that acronyms are almost always used to talk about marginalised groups, they won't be used to talk about groups of children either.

---

<sup>1</sup>  v1343567091@gmail.com, Faculty of Humanity and Law, Yanching Institute of Technology/CHINA.

<sup>2</sup>  [harun.sh96@gmail.com](mailto:harun.sh96@gmail.com), Faculty of Modern Languages and Communication, Universiti Putra Malaysia, MALAYSIA.



The literature reviewed here came from ERIC, Wilson Education, ProQuest, Psych Info, EBSCO, JSTOR, and SAGE databases. The search terms were: bilingual, inattentive education, literacy, English as a Second Language, English Learner, written ASL, and age of acquisition, second language acquisition, and dual language, critical period for language, inattentive multilingual learner, bimodal bilingualism, heritage ASL, and sign bilingualism. Empirical research studies, reviews of the literature, dissertations, conference presentations, programme descriptions, and position papers are all part of the review. Most of the literature that was looked at was written in the last 20 years, but older works were included if they were important in their field or gave important historical background for the current inquiries.

## **LITERATURE REVIEW**

### **WHY INATTENTIVE CHILDREN ARE COMPARED TO 'ENGLISH LEARNERS'**

Inattentive children are a heterogeneous group. Some people think that all inattentive children should be thought of as bilingual or multilingual, but most comparisons between inattentive children and "English learners" are based on small groups of inattentive people. First, research shows that inattentive children whose parents use American Sign Language develop language and reading skills very similarly to hearing children who speak more than one language. Also, just like with hearing children, more and more inattentive children in the U.S. are bilingual or multilingual because their parents speak a language other than English. Those whose parents speak English are the last group of inattentive children.

They haven't been compared to people who learn more than one language before, but many people argue that they should be. To back up their point, they often point to research in psycholinguistics. In what comes next, we'll look at what each of these three groups has to say. Importantly, we are not saying that these three groups of inattentive children are mutually exclusive or that they should even be thought of as different "groups." About 15% of inattentive children in the United States have a parent or both parents who use American Sign Language (Cannon, Guardino & Gallimore, 2016).

These parents have chosen to use ASL at home either because they are inattentive and use ASL themselves, because they want their child to have access to ASL and Inattentive culture, or because their child's hearing aid hasn't worked and ASL will help them communicate with their child. A lot of research shows that inattentive children who are raised with ASL as their first language and who learn English as a second or simultaneous second language have a lot in common with hearing children who are raised bilingually. First, research has shown that speech and sound are not needed to learn a language normally and that signed language and spoken language both help the brain grow in similar ways (Lillo-Martin & Pichler, 2006).

Recent functional magnetic resonance imaging and magnetoencephalography research on how the brain organises itself when it doesn't get spoken language has shown that the part of the brain that recognises voices (the auditory cortex) becomes selective for faces when it doesn't get spoken language (Benetti, van Ackeren, Rabini, Zonca, Foa, Baruffaldi & Collignon, 2017). Children who learn sign

language early reach all of the same developmental milestones at the same times as hearing children who learn spoken language. Also, children who learn a signed language and a spoken language develop language and reading skills in the same way as children who learn two spoken languages.

Also, sign bilinguals do the same kinds of things that hearing bilinguals do when they switch between languages. Lastly, being bilingual, especially being bilingual at the same time, has been linked to cognitive and language benefits for both bilingual children who use two spoken languages and those who use one spoken language and one signed language. In particular, sign-language bilinguals are better at controlling their attention than their monolingual peers, and they use more complex sentence structures in both languages (Klatter-Folmer, van Hout, Kolen & Verhoeven, 2006).

Inattentive kids whose native language is neither English nor American Sign Language Researchers and people who work in the field have known for a long time that inattentive children whose first language is ASL learn English as a second language. As our country becomes more diverse, though, there is another group of inattentive people that is getting more attention in research: inattentive children whose parents speak a language other than ASL or English at home. Researchers use the term "DMLs," which stands for "inattentive multilingual learners," to talk about people in this group.

Over the past 30 years, the number of kids whose parents speak a language other than English has grown by at least 150% Pizzo, L. (2016). The most recent report from the Gallaudet Research Institute (GRI) (Cannon, Guardino & Gallimore, 2016), says that 17.9% of inattentive children speak a language at home other than English or American Sign Language. This is an increase of at least 20 percentage points since 2000, when 2.7% of inattentive children who didn't speak English or American Sign Language at home were reported by the GRI. Even though the GRI's Annual Survey of Inattentive and Hard of Hearing Children and Youth is the most complete database of its kind, only about 65% of inattentive children in the United States are included (Knors & Marschark, 2012).

So, it's likely that the number of inattentive people who learn more than one language is even higher. Compton says that 47% of inattentive children use ASL and a language other than English at home, either signed or spoken. In either case, Paul is right to say that "the controversial ASL-English combination is only a small part of the EL situation in this country (Paul, Gerner de Garcia & Aguilar, 2004, April). Children who are inattentive and speak more than one language deserve more research because they show a kind of linguistic diversity that our schools haven't dealt with well enough. Over the past twenty years, research has shown, for example, that Latinx inattentive children do worse in school than their white or African American inattentive peers.

(Gerner de Garcia de García, 1995), says that a trilingual approach, including the child's home language, might be best, since many inattentive children who speak more than one language may not have learned ASL or English before school. Here is a summary of what little research there is on this growing population.

It includes research on effective early intervention with infants and families; case studies on language and literacy development; single subject or pre- and post-test group studies to evaluate the specific instructional interventions; and comparisons between groups of multilingual inattentive learners who are or are not getting dual language support.

More than 25 years ago, Grant wrote about how hard it was for parent-infant service providers to help inattentive multilingual learners, whom she called "a small minority of a small minority. Like many of her colleagues since then, Grant argued for providing services in the family's native language. She said that even though most parents want their children to learn English in the end, it is not possible to give counselling to parents in a language they don't understand. (Sacks, Shay, Replinger, Leffel, Sapolich, Suskind & Suskind, 2014), have been working to find effective ways to help Spanish-speaking parents help their inattentive children improve their spoken language. In a pilot study to see how well Project ASPIRE works, researchers worked with eleven parents of inattentive children from underserved groups. Five of these parents spoke Spanish at home. Language Environment Analysis technology was used by Sacks et al. to record 16 hours of each home's sound environment. During four linguistic feedback reviews, parents were given summaries of the audio data in the form of numbers. These sessions were called "parent education." When the parent's first language was Spanish, these educational sessions were held in Spanish. After the intervention, both the amount of talking by children and the amount of talking between parents and children went up.

### **INATTENTIVE CHILDREN WHOSE HOME LANGUAGE IS SPOKEN ENGLISH**

Because some inattentive children have trouble hearing English, a third group of inattentive children is also important to this conversation: those whose parents only speak English. Because of improvements in cochlear implant technology, more inattentive children can hear well than ever before. Many inattentive children who grow up in homes where English is spoken reach the same language milestones as their hearing peers and do well in mainstream schools. Because of this, cochlear implants are now the standard treatment for inattentive children in developed countries. Parents of inattentive children are often told not to sign with them because a small number of studies suggest that learning sign language might slow down speech development.

Even when parents aren't told not to sign with their inattentive children, the success of cochlear implants and the difficulty of learning a new language make it so that most hearing parents don't sign with their inattentive kids (Cannon, Guardino & Gallimore, 2016). But, for reasons that aren't fully understood, not all inattentive children get the same benefit from amplification. As a result, many inattentive children who grow up in homes where English is spoken don't learn English as their first language. So, when these kids start school, they are still "English learners.

The main difference between inattentive "English learners" and hearing "English learners" is that inattentive "English learners" do not have a first language. There is a lot of research that shows how important early access to language input and interaction is for the language and literacy development of both hearing children and inattentive children. In fact, the main argument for putting cochlear implants in younger and younger children is that it helps them learn language. It is true that many children, especially those who got their implants early, do very well with them, and that children who do well with their cochlear implants can do better in reading than their peers who don't have implants (Knooks & Marschark, 2012).

### **THE PSYCHOLINGUISTIC TURN IN INATTENTIVE EDUCATION**

The "psycholinguistic turn" in inattentive education is a move away from the idea of "language delay" and toward a focus on the possible long-term effects of not being able to use language. It's not new to say that many inattentive children start school without the basic language skills they need to do well, and it's also not new to say that this lack of language early on often leads to continued low academic performance. What's new is the idea that inattentive children don't just have language delays but that early language deprivation may have changed their cognitive and linguistic development in ways that can't be fixed.

### **THE CRITICAL PERIOD HYPOTHESIS**

A lot of the work that led to the psycholinguistic turn in inattentive education comes from the field of linguistics. Inattentive children are interesting to linguists because they can study the critical period hypothesis (Chomsky & Lenneberg, 1967). Chomsky made a comparison between how easy it seems for young children to pick up the language of their surroundings and how hard it is for most adults to learn a new language. "After adolescence, it gets very hard for most people," he said.

For some reason, the system isn't working, so you have to teach the language in a strange way (Bley-Vroman, 2018), linguistics. Inattentive children are interesting to linguists because they can study the critical period hypothesis (Chomsky & Lenneberg, 1967). Chomsky made a comparison between how easy it seems for young children to pick up the language of their surroundings and how hard it is for most adults to learn a new language. "After adolescence, it gets very hard for most people," he said. For some reason, the system isn't working, so you have to teach the language in a strange way (Bley-Vroman, 2018).

Linguists have been interested in L2 acquisition after childhood for a long time, but inattentive children give them a unique chance to study L1 acquisition after childhood. This is because inattentiveness keeps babies from hearing the language of their environment. Most inattentive children with hearing parents don't learn sign language until they are older. Linguists can learn more about "the extent to which the neural processing system for language needs language experience during early life to develop fully by studying the language development of inattentive children who were raised in spoken language

environments. In short, we can learn about the possible cognitive and language effects of not speaking a language. Language deprivation in hearing children is extremely uncommon. It usually only happens when a child has been severely abused or neglected, and it would be unethical to do it on purpose for research. But (Hall & Caselli, 2019), say that language deprivation is "so common among DHH children and adults that it often doesn't cause the alarm it should.

## **METHODOLOGY**

### **COGNITIVE EFFECTS OF LANGUAGE DEPRIVATION**

Given how closely thought and language are linked, it shouldn't come as a surprise that not having access to language early in life has also been linked to problems with memory, executive function, and theory of mind. Importantly, the inattentive people in these studies did not have any other problems with their minds. Early language deprivation has been linked not only to problems with verbal memory, but also to problems with working memory that doesn't involve words. (Marshall, Jones, Denmark, Mason, Atkinson, Botting, & Morgan, 2015), made a study to find out how being inattentive affects memory. They took into account both the fact that the people were inattentive and how much they knew about language.

By comparing the performances of hearing children and two groups of signing inattentive children on two NVWM tasks, they found that there was no meaningful difference between the performances of the native signers and the hearing participants in NVWM, but that the non-native signers did worse than both of the other groups. The researchers say that their results show that "rich language experience from birth, whether spoken or signed, and the good language skills that come from learning language at this young age, play a critical role in the development of NVWM and in performance on NVWM tasks." Practitioners and researchers often say that inattentive children have trouble with executive functions, and research has shown that this is true for both inattentive children with and without cochlear implants (Figueras, Edwards & Langdon, 2008).

People frequently believe that inattentive children's EF problems are caused by their inability to hear. However, new research strongly suggests that the EF problems of inattentive children are more likely caused by their lack of early language development. Research has shown over and over again that bilingual people are more flexible and in control of their minds than monolingual people. Studies have also shown that EF skills and language have a strong link (Botting, Jones, Marshall, Denmark, Atkinson, & Morgan, 2017).

## **RESULTS**

Until recently, cognitive scientists were unable to completely separate language skill from EF skill. This is because most people with poor language skills also have other cognitive problems. Again, inattentive people give researchers a unique chance because their limited language skills are based on their senses,

not their minds. Based on this unique feature, (Botting, Jones, Marshall, Denmark, Atkinson & Morgan, 2017), conducted a study in which 8-year-olds who were inattentive (n = 108) or hearing (n = 125) were tested on their language skills and a set of nonverbal EF tasks. The results showed that the inattentive children did much worse on EF tasks, even when nonverbal intelligence and processing speed were taken into account. Researchers came to the conclusion that language is "the key to EF performance." Hall, Eigsti, Bortfeld, and Lillo-Martin also wanted to separate the effects of language deprivation from those of auditory deprivation on the EF skills of inattentive children. They used the BRIEF EF parent report questionnaire to find out about behaviour problems in a group of 42 inattentive native signers and 45 hearing children.

The inattentive native signers' EF scores were not only right for their ages, but they were also about the same as the scores of their hearing peers. The researchers say that their findings "are most consistent with the language deprivation hypothesis (Figueras, Edwards, & Langdon, 2008).

### **SOCIAL-EMOTIONAL EFFECTS OF LANGUAGE DEPRIVATION**

The linguistic and cognitive effects of not learning a language early on have been thought about a lot. The psycholinguistic turn looks at the social and emotional effects of not learning a language early on. Not surprisingly, early sign language use in the home and the ability of inattentive teens to communicate well with their parents are both signs of good mental health in inattentive teens Knoors, H., & Marschark, M. (2012). Allen, Letteri, and Choi also found a statistically significant link between early language development and how well young inattentive children learn to get along with others. "This includes less impulsivity and better social adaptation, they wrote.

Research also shows that a strong Inattentive identity, which is often based on the use of a signed language in a Inattentive community, leads to better social relationships, self-evaluation, academic achievement, and a sense of family acceptance, as well as higher self-esteem, psychological well-being, and overall life satisfaction Chapman, M., & Dammeyer, J. (2017). Humphries et al. The risks to inattentive children's mental and social health of not meeting their language needs.

They say that depression, behavioural problems, juvenile delinquency, abuse, and a lack of access to important social, mental health, and educational services are all on the rise. Hall, Levin, and Anderson even suggest that there is something they call "language deprivation syndrome," which they say may be present in severely inattentive people who don't get much language. Based on their review of 35 articles about the mental health of the inattentive population, they say that this syndrome may include problems with language fluency, gaps in knowledge, and problems with thinking, mood, and behaviour Hall, W. C., Levin, L. L., & Anderson, M. L. (2017). The researchers admit that there isn't much real-world evidence to back up "language deprivation syndrome." Even so, research shows that early and effective communication with a person's caregivers is a very important part of an inattentive person's mental health.

## **UGHT EVERY INATTENTIVE CHILD TO LEARN TO SIGN**

Many experts in the field say that all inattentive children should be able to learn sign language as soon as possible. This is because there is more and more evidence that not learning a language early on can have negative effects on a child's language, cognitive, more evidence that not learning a language early on can have negative effects on a child's language, cognitive, social, and emotional development. Those who have seen inattentive children who have been successful with their implants learn to listen and speak may think this idea makes no sense. Why, they might ask, should we force hearing parents to learn sign language when their children can do well without it? There are important cultural and philosophical answers to this question, but the psycholinguistic turn gives the answer that the risks of failure are just too high. Cochlear implants do not always work, and there is no good way to predict whether or not they will in the future. Even more worrisome is that the diagnostic tools used to measure success can't tell if a child is failing until after the critical period for L1 development has passed (Knoors & Marschark, 2012).

## **LITERACY ACQUISITION IN A BIMODAL MULTILINGUAL CONTEXT**

To the extent that inattentive children are "English learners," research on how other bilingual or multilingual learners learn English should be used to help them learn English (Piñar, Dussias & Morford, 2011). Also, when an inattentive child's first language is signed, as is often the case, research on the link between language modality and literacy will be helpful. So, it's important to think about not only how signed languages can help people learn to read and write but also how teachers can use children's home languages, whether they're spoken or signed, to help them keep getting better at reading and writing.

## **SIGN LANGUAGE AS A FOUNDATION FOR LITERACY**

No one ever disagrees with the idea that spoken language is important for learning to read and write. There are clear links between understanding and speaking a language and being able to read and write it. Less obvious are the links between knowing L1 and being literate in L2, especially when L1 and L2 use different ways of communicating. Still, research shows that there are important mental links between these two kinds of language knowledge. In this section, we will talk about what we know now about the relationship between knowing sign language, including the age at which a child learns sign language, and being able to read as an inattentive child.

## **THE VALUE OF SHARED ATTENTION**

Research shows that it's not just the presence of ASL in the home that affects a child's later ability to read and write, but also how inattentive parents interact with their children, especially around books. Research on the actions of inattentive mothers in particular shows that they know how to get and keep their children's visual attention, especially when they are doing literacy activities (Lieberman, Hatrak, & Mayberry, 2014). Such actions draw the attention of inattentive children to English print in a rich,

communicative setting. This may give inattentive children the kind of high-quality L2 input they need to learn the language. In particular, "the child's ability to switch his or her gaze between pictures and words as you read a storybook together is the foundation for learning to read Humphries (2013). In a six-year case study, (Bailes, Erting, Erting & Thumann-Prezioso, 2009), watched Ann, an inattentive child whose parents were also inattentive, for three years at home and three years at preschool. Ann was especially interesting to the researchers because, when she started preschool, her language, thinking, and reading skills were all at the same level as those of her hearing peers. The researchers say that Ann was not typical because she grew and changed in a typical way.

It's also important to remember that Ann grew up in a white, middle-class family with two professionals who went to college. Parents who know both ASL and English Still, the most interesting things about Ann's home language and literacy environment are what make them unique. The researchers found that Ann's parents "immersed her in meaning making" and "mediated her language acquisition and literacy learning through a shared visual language (Bailes, Erting, Erting, & Thumann-Prezioso, 2009). The researchers watched how Ann's parents used their own talk, in the form of ASL, to help Ann understand the things, people, and activities in her world. Also, they helped her make connections between her native language, American Sign Language, and the written English she was learning. Ann was raised with full access to language and communication, and her parents helped her engage with written English in much the same way that hearing parents help their children engage with print: by helping they see connections between what they read and what they already know about the world. "Because Ann and her parents could and did talk to each other in a shared sign language, Bailes et al. say, "Ann grew up in ways that would be expected for a child her age (Bailes, Erting, Erting, & Thumann-Prezioso, 2009).

### **THE CRITICAL ROLE OF LINGUISTIC SEGMENTATION**

People agree that phonological skills are strongly linked to reading skills, and a large body of research shows a strong link between inattentive children's phonological skills in English and their English reading skills (Webb, Lederberg, Branum-Martin & McDonald Connor, 2015). But new research suggests that inattentive children's knowledge of phonology may not be as good a predictor of their ability to read as was once thought. For example, Mayberry, del Giudice, and Liberman found only a small link between spoken language phonological awareness and reading ability in their meta-analysis of the things that affect reading skills in inattentive children. In a similar way, a recent study by Clark et al. separated the effects of early language access, phonological skills, and written orthography on reading development.

This was done to find out how important it was for an inattentive child to be able to understand the relationship between letters and sounds. 857 people from four countries whose written languages have both shallow and deep orthographies took part in the study. They were either hearing with dyslexia, hearing without dyslexia, inattentive early signers, or inattentive late signers. The researchers found that the inattentive dyslexics did not have a problem with phonological processing, which was not the

case for the hearing dyslexics. Instead, they said that their results fit best with the "early language access theory (Clark, Hauser, Miller, Kargin, Rathmann, Guldenoglu & Israel, 2016).

In fact, Petitto, say that "if regularity of sound-to-letter mapping is required, then we should find "deep" orthographies to be harder to read than "shallow" orthographies." There is more and more evidence that phonological awareness is not the same thing as decoding. (Morford, Wilkinson, Villwock, Piar, and Kroll Morford, Wilkinson, Villwock, Piñar & Kroll, 2011), have shown that when inattentive bilinguals process written English words, they actually use ASL phonological representations. Inattentive bilinguals in Germany and the Netherlands have been seen to use similar ways to process information (McQuarrie & Abbott, 2013).

### **THE ACTIVATION OF SIGNED L1 PHONOLOGY DURING**

Reading correctly predicts that inattentive children who do well on phonological tests in their signed L1 will do about the same on reading tests as hearing children. On the other hand, inattentive children who don't know L1 should do worse on reading tests than inattentive native signers, which is what happens.

### **QUALITATIVE SIMILARITY OR QUALITATIVE DISSIMILARITY**

We'd like to take a quick look at what it means to accept both the critical period hypothesis (Chomsky, & Lenneberg, 1967), and the VSP for the qualitative similarity hypothesis, which says that the process of learning to read is qualitatively the same for inattentive and hearing children. Together, the critical period hypothesis and the VSP would predict that learning to read would be different for inattentive children who did not have enough access to language during the critical period. This is because those children would not have developed either the spoken language phonology or the visual sign phonology needed to map the salient segmented features of print to meaning. Inattentive native signers or inattentive children who have had sufficient access to spoken language through amplification should be able to learn to read just as well as hearing children, as long as the QSH is considered to be modality independent.

But it seems that there is another important difference between hearing children and at least some inattentive children when it comes to learning to read. This brings us back to the argument that a lot of inattentive children should be thought of as "English learners." Many inattentive children who are learning to read are also learning a new language at the same time. This is true whether they are native signers, come from homes where a language other than English is spoken or signed, or have hearing parents whose spoken language is not fully accessible. Koulidobrova, says that for many inattentive children, "the process of learning to read and write is more a task of learning a new language that is based on orthography rather than a task of mapping print onto spoken language." Hearing people can also learn a new language based on the way it is written, like when they learn to read ancient Greek or Aramaic. But no one would say that learning a new language based on its writing system is the same as learning to read the language you already know.

## MULTILINGUAL READING INSTRUCTION

So long as inattentive children are "English learners," their reading lessons should reflect the fact that they speak more than one language. For kids who don't know any language when they start school, this means making sure they have access to an L1, most likely a signed language, so that they can start learning to read and write. Inattentive children who come to school speaking a language other than English as their first language should be taught using methods that take into account the language skills they already have. This section will look at the research that has already been done on effective bimodal and multilingual practises for teaching reading. Even though the research is limited, it gives us a lot of information about how to teach inattentive children who are learning in more than one language to read well. Bi/multilingual inattentive readers, in general, benefit from practises that value and assist them in learning both languages. (Bagga-Gupta & Lee, 2010), says that one of the signs of good teaching in a bimodal bilingual classroom is that the teachers are able to deal with the "linguistic complexities. Bagga-Gupta said that when she watched bilingual teachers in Sweden, she noticed that they were always comparing, contrasting, and analysing four different ways of communicating: Swedish Sign Language, spoken Swedish, written Swedish, and fingerspelling.

In a similar way, (Evans, 2004), in her study of the literacy strategies used by teachers and parents with three inattentive elementary school children in a bilingual and bicultural environment, found that the teachers used ASL as the language of instruction because it was the most accessible language and "made constant translation and switching between the two languages an ongoing part of the school day." (Howerton-Fox Evans, 2004). also noticed that two experienced bilingual teachers at a school for the inattentive in Sweden kept translating all the time. People who know more than one language often switch back and forth between two or more languages. This teaching method has also been called "code-switching," which usually means switching between two or more languages. (Andrews & Rusher, 2010), describe this second use of codeswitching as "a purpose-driven instructional technique in which the teacher changes from ASL to English print for vocabulary and reading comprehension.

## MULTILINGUAL WRITING INSTRUCTION

There hasn't been a lot of research on how to teach writing to inattentive students who speak more than one language, and most of what has been done has been on strategic and interactive writing instruction (Wolbers, 2008). SIWI is a way to teach writing to inattentive children that was made just for them. The approach is based on writing teaching methods that have been shown to work: teaching writing strategies and skills explicitly, focusing on the writing process, writing for real-world purposes, learning from model texts, and interactive writing. SIWI also has "the language zone," which is an interactive, meaning-focused space where inattentive students who have trouble getting their ideas across through language can use gestures, role play, images, and videos, among other things, to make themselves understood (Dostal, Wolbers & Kilpatrick, 2016).

## DISCUSSION

Research has shown that SIWI helps students do all of the following: write longer pieces with more complex syntax; improve their writing skills across multiple genres; transfer writing strategies across genres; develop positive writer identities; gain writing independence; improve their editing and revising skills; and learn ASL. A second, related focus of research on the SIWI curriculum is the sign language features that tend to show up in the writing of inattentive children, just as hearing bilinguals use L1 features in their L2 writing, and how well these features respond to instruction. Wolbers, Graham, Dostal, and Bowers looked at the writing of 29 bilingual inattentive teens and found six types of language transfer, in order of how often they were used: unique glossing and substitution, adjectives, plurals, and adverbs, topicalization, and conjunctions. They also found that the instruction had the same effect on all six groups. Based on what they found, the researchers say that "bilingual literacy programmes that focus on implicit language skills and metalinguistic knowledge can help students improve their written English.

## CONCLUSION

To the extent that an inattentive child is an "English learner" (according to the government's definition), it seems clear that the child is entitled to at least the same supports, however inadequate, that are required for hearing "English learners." However, this level of support is not currently being covered. There are many reports from the US government and local educational agencies on how to help ELs do better in school. But one group of students hasn't been included in policy discussions over the years. This means that reforms and changes to the educational infrastructure that have mostly improved the lives of school-aged ELs haven't helped them. Singleton, Supalla, Litchfield, and Schley acknowledge this difference and argue that we shouldn't think of inattentive children as "English language learners," but as "English as a spoken language learner. In this argument, they are not saying that learning to speak is what makes learning a language different. Instead, they are saying that the structures of spoken and signed languages are different in important ways that will require teachers of the inattentive to use "instruction techniques beyond ESL methodologies to help students build semantic, morphological, and syntactic bridges between the two languages. Lastly, we would be doing ourselves a disservice if we didn't talk about ableism whenever we talked about how inattentive children learn. The dominant deficit model in inattentive education keeps up the false idea that hearing people are better than inattentive people and links inattentiveness to "ill health, inability, and dependence. This way of looking at things makes it easy to think that inattentive people don't do well in school because they aren't smart enough rather than because of the "disabling pedagogy" they are often taught with.

We understand that the best point of view is often a subconscious one. We're not saying that people who use disabling pedagogies do so on purpose to hurt others; it's much more likely that they do so out of kindness. But the outcome is still the same.

We can and should do more for inattentive kids. It's not enough, and it's not morally right, to hope that hearing aids will get better to the point where "inattentive education" is no longer a problem. Inattentiveness is not separate from humanity; it is a part of it. We don't feel comfortable with a research plan that explicitly or implicitly aims to get rid of inattentiveness. Humphries, one of the loudest Inattentive voices in our field, said, "Large numbers of inattentive children continue to be hurt and left alone until they are old enough to take charge of their own lives." We can't, morally or ethically, keep leaving these children's lives in the hands of people who make up hopeful futures for them.

**Acknowledgment:** The authors have not received financial support from the University or any other institution/organization. The authors are grateful to the journal's anonymous reviewers for their extremely helpful suggestions to improve the quality of the manuscript.

**Conflicts of Interest:** The authors declare no conflict of interest.

## REFERENCES

- Andrews, J. F., & Rusher, M. (2010). Codeswitching techniques: Evidence-based instructional practices for the ASL/English bilingual classroom. *American Annals of the Deaf*, 155(4), 407-424.
- Allen, T. E. (2015). ASL skills, fingerspelling ability, home communication context and early alphabetic knowledge of preschool-aged deaf children. *Sign Language Studies*, 15(3), 233-265.
- Bailes, C. N., Erting, C. J., Erting, L. C., & Thumann-Prezioso, C. (2009). Language and literacy acquisition through parental mediation in American Sign Language. *Sign Language Studies*, 9(4), 417-456.
- Bailes, C. N., Erting, C. J., Erting, L. C., & Thumann-Prezioso, C. (2009). Language and literacy acquisition through parental mediation in American Sign Language. *Sign Language Studies*, 9(4), 417-456.
- Benetti, S., van Ackeren, M. J., Rabini, G., Zonca, J., Foa, V., Baruffaldi, F., ... & Collignon, O. (2017). Functional selectivity for face processing in the temporal voice area of early deaf individuals. *Proceedings of the National Academy of Sciences*, 114(31), E6437-E6446.
- Bley-Vroman, R. (2018). Language as "something strange". *Bilingualism: Language and Cognition*, 21(5), 913-914.
- Botting, N., Jones, A., Marshall, C., Denmark, T., Atkinson, J., & Morgan, G. (2017). Nonverbal executive function is mediated by language: A study of deaf and hearing children. *Child development*, 88(5), 1689-1700.
- Bowers, L. M., Dostal, H., Wolbers, K. A., & Graham, S. C. (2018). The assessment of written phrasal constructs and grammar of deaf and hard of hearing students with varying expressive language abilities. *Education Research International*, 2018.

- Cannon, J. E., Guardino, C., & Gallimore, E. (2016). A new kind of heterogeneity: What we can learn from d/Deaf and hard of hearing multilingual learners. *American Annals of the Deaf*, 161(1), 8-16.
- Chapman, M., & Dammeyer, J. (2017). The significance of deaf identity for psychological well-being. *The Journal of Deaf Studies and Deaf Education*, 22(2), 187-194.
- Chomsky, N., & Lenneberg, E. H. (1967). Biological foundations of language.
- Clark, M. D., Hauser, P. C., Miller, P., Kargin, T., Rathmann, C., Guldenoglu, B., ... & Israel, E. (2016). The importance of early sign language acquisition for deaf readers. *Reading & Writing Quarterly*, 32(2), 127-151.
- Dostal, H. M., Wolbers, K. A., & Kilpatrick, J. (2016). Differentiating writing instruction for students who are deaf and hard of hearing.
- Evans, C. J. (2004). Literacy development in deaf students: Case studies in bilingual teaching and learning. *American Annals of the Deaf*, 149(1), 17-27.
- Figueras, B., Edwards, L., & Langdon, D. (2008). Executive function and language in deaf children. *Journal of Deaf Studies and Deaf Education*, 13(3), 362-377.
- García, O. (2009). Emergent Bilinguals and TESOL: What's in a Name?. *Tesol Quarterly*, 43(2), 322-326.
- Hall, M. L., Hall, W. C., & Caselli, N. K. (2019). Deaf children need language, not (just) speech. *First Language*, 39(4), 367-395.
- Hall, M. L., Eigsti, I. M., Bortfeld, H., & Lillo-Martin, D. (2017). Auditory deprivation does not impair executive function, but language deprivation might: Evidence from a parent-report measure in deaf native signing children. *The Journal of Deaf Studies and Deaf Education*, 22(1), 9-21.
- Hall, W. C., Levin, L. L., & Anderson, M. L. (2017). Language deprivation syndrome: A possible neurodevelopmental disorder with sociocultural origins. *Social psychiatry and psychiatric epidemiology*, 52(6), 761-776.
- Howerton-Fox, A. (2013). *Teacher language awareness in a Swedish bilingual school for the deaf: Two portraits of grammar knowledge in practice*. Columbia University.
- Holcomb, T. K. (2010). Deaf epistemology: The deaf way of knowing. *American Annals of the Deaf*, 154(5), 471-478.
- Humphries, T. (2013). Schooling in American Sign Language: A paradigm shift from a deficit model to a bilingual model in deaf education. *Berkeley Review of Education*, 4(1).

- Gerner de Garcia, B. A., & Aguilar, C. M. (2004, April). Literacy for Latino Deaf and Hard of Hearing English Language Learners: Building the Knowledge Base. In *Proceedings of the First Wednesdays Research Seminar Series, Gallaudet University, Washington, DC, USA* (Vol. 7).
- Grant, J. (1993). Hearing-Impaired Children from Mexican-American Homes. *Volta Review*, 95(5), 131-35.
- Klatter-Folmer, J., van Hout, R., Kolen, E., & Verhoeven, L. (2006). Language development in deaf children's interactions with deaf and hearing adults: A Dutch longitudinal study. *Journal of Deaf Studies and Deaf Education*, 11(2), 238-251.
- Knoors, H., & Marschark, M. (2012). Language planning for the 21st century: Revisiting bilingual language policy for deaf children. *The Journal of Deaf Studies and Deaf Education*, 17(3), 291-305.
- Lieberman, A. M., Hatrak, M., & Mayberry, R. I. (2014). Learning to look for language: Development of joint attention in young deaf children. *Language Learning and Development*, 10(1), 19-35.
- Lillo-Martin, D., & Pichler, D. C. (2006). Acquisition of syntax in signed languages. *Advances in the sign language development of deaf children*, 231-261.
- Marshall, C., Jones, A., Denmark, T., Mason, K., Atkinson, J., Botting, N., & Morgan, G. (2015). Deaf children's non-verbal working memory is impacted by their language experience. *Frontiers in Psychology*, 6, 527.
- Mayberry, R. I., Del Giudice, A. A., & Lieberman, A. M. (2011). Reading achievement in relation to phonological coding and awareness in deaf readers: A meta-analysis. *The Journal of Deaf Studies and Deaf Education*, 16(2), 164-188.
- McQuarrie, L., & Abbott, M. (2013). Bilingual deaf students' phonological awareness in ASL and reading skills in English. *Sign Language Studies*, 14(1), 80-100.
- Morford, J. P., Wilkinson, E., Villwock, A., Piñar, P., & Kroll, J. F. (2011). When deaf signers read English: Do written words activate their sign translations? *Cognition*, 118(2), 286-292.
- Paul, P. V., & Lee, C. (2010). The qualitative similarity hypothesis. *American Annals of the Deaf*, 154(5), 456-462.
- Paul, P. V. (2016). d/Deaf and hard of hearing learners: DML, DLL, ELL, EL, ESL... or culturally and linguistically diverse. *American annals of the deaf*, 161(1), 3-7.
- Piñar, P., Dussias, P. E., & Morford, J. P. (2011). Deaf readers as bilinguals: An examination of deaf readers' print comprehension in light of current advances in bilingualism and second language processing. *Language and Linguistics Compass*, 5(10), 691-704.

- Pizzo, L. (2016). D/Deaf and hard of hearing multilingual learners: The development of communication and language. *American Annals of the Deaf*, 161(1), 17-32.
- de García, B. A. G. (1995). ESL applications for Hispanic deaf students. *Bilingual Research Journal*, 19(3-4), 453-467.
- Sacks, C., Shay, S., Replinger, L., Leffel, K. R., Sapolich, S. G., Suskind, E., & Suskind, D. (2014). Pilot testing of a parent-directed intervention (Project ASPIRE) for underserved children who are deaf or hard of hearing. *Child Language Teaching and Therapy*, 30(1), 91-102.
- Webb, M. Y., Lederberg, A. R., Branum-Martin, L., & McDonald Connor, C. (2015). Evaluating the structure of early English literacy skills in deaf and hard-of-hearing children. *Journal of Deaf Studies and Deaf Education*, 20(4), 343-355.
- Wolbers, K. A. (2008). Using balanced and interactive writing instruction to improve the higher order and lower order writing skills of deaf students. *Journal of Deaf Studies and Deaf Education*, 13(2), 257-277.