

LANGUAGE ACQUISITION AMONG SIBLINGS

By

Jameesa M. Walker

July, 2025

Director of Thesis: Kristen Gregory, Ph.D.

Major Department: Department of Elementary Education and Middle Grades Education

ABSTRACT

Language acquisition may be significantly impacted by sibling relationships. This study examines the differing language abilities among impoverished siblings. The purpose of this study is to describe the relationship between having siblings and language acquisition in impoverished children in a rural elementary school. This qualitative research is conducted through the use of a case study. Data were gathered through interviews and observational field notes. The findings indicated themes related to The Leader and The Follower, and implications are shared for both parents and educators for supporting language acquisition for siblings who fall under these two themes.

Keywords: language, acquisition, impoverished, siblings

Language Acquisition Among Siblings

A Thesis

Presented to the Faculty of the Department of Elementary Education and Middle Grades
Education

East Carolina University

In Partial Fulfillment of the Requirements for the Degree
Master of Arts in Elementary Education

By

Jameesa M. Walker

July, 2025

Director of Thesis: Kristen Gregory, Ph.D.

Thesis Committee Members:

Julie Stanley, Ed.D.

Monica Gonzalez, Ph.D.

© Jameesa M. Walker, 2025

TABLE OF CONTENTS

Introduction.....	1
Literature Review.....	3
Impact of Poverty on Child Development.....	4
<i>Educational Outcomes</i>	4
<i>Parental Involvement</i>	5
Sibling Dynamics in Low-Income Families.....	6
<i>Educational Benefits</i>	6
<i>Differences Among Sibling Academic Achievement</i>	7
Mechanisms Behind Younger Siblings' Thriving.....	8
<i>Role Modeling</i>	8
Conclusion.....	10
<i>Limitations of Existing Research</i>	10
<i>Directions for Future Research</i>	10
Methodology.....	12
Participants.....	12
Context.....	13
Procedures to Obtain Consent.....	14
Data Collection.....	15
Data Analysis.....	16
Trustworthiness.....	18
Findings.....	19
The Follower.....	19
<i>Mimicking</i>	19
<i>Approval Seeking</i>	21
<i>Culmination of Behaviors for Dependency</i>	23
The Leader.....	24
<i>Control</i>	24
<i>Informing</i>	27
<i>Gratification</i>	28
<i>Culmination of Behaviors for Responsibility</i>	29
Discussion.....	31

Language Acquisition at Home.....	31
Language Acquisition in the Classroom	34
Implications for Further Research.....	36
Conclusion	39
References.....	40
Appendix A: Principal Consent Form.....	44
Appendix B: County Approval	45
Appendix C: IRB Approval	46
Appendix D: First Grade Teacher Approval.....	48
Appendix E: Second Grade Teacher Approval.....	49
Appendix F: Teacher Consent	50
Appendix G: Parent Consent for Child.....	51
Appendix H: Parent Consent for Child.....	52
Appendix I: Student Assent	53
Appendix J: Parent Consent.....	54
Appendix K: Initial Teacher Interview	55
Appendix L: Observational Field Notes for First Grade	56
Appendix M: Observation Field Notes for Second Grade.....	57
Appendix N: Final Teacher Interview Protocol.....	58
Appendix O: Student Interview Protocol.....	59
Appendix P: Parent Interview Protocol	60

Introduction

Does having siblings actually make people smarter? Researchers have determined that language acquisition begins in the womb and develops further during the early years of childhood. Throughout the first five to six years of a child's life, they develop significant knowledge and language abilities from the more intelligible individuals in their lives. These individuals include, but are not limited to, parents, grandparents, and siblings.

As students enter into school, educators are seeing vast differences in the language abilities of each student. Research shows that "positive sibling relationships are conducive to improving children's and adolescents' ability to understand social emotions, prosocial skills, and conflict resolution strategies, thereby increasing their prosocial behaviors and decreasing internalized and externalized problem behaviors" (Cao et al., 2020, p. 588). Furthermore, the economics of the family suggests that children's educational achievement is related to family size (Booth & Kee, 2008). This influences the question of whether or not the possession of siblings is directly connected to impoverished students' language acquisition in early ages and if so, to what extent.

There is currently very little research about the impact that siblings have on the language acquisition of one another in impoverished families. However, it is plausible that impoverished students with siblings come into school with better comprehension, communication, and social-emotional skills due to their increased exposure to language and social interactions. Parents of impoverished children often face difficulties meeting their children's educational and emotional needs due to financial strain, and this is where siblings may step in to fill those gaps (Şengönül, 2021). Additionally, sibling relationships are the longest standing relationships in a person's life; if that relationship is a positive one, it enhances empathy, and prosocial behaviors (Cao et al., 2020).

Furthermore, there is substantial research which supports the theory that older siblings have a significant impact on several aspects of the younger siblings' lives. For example, the positive sibling relationship could play a compensating and buffering role in the relationship between parents' insufficient support and children's social development (Cao et al., 2020). Additionally, a 2008 study by Booth and Kee focuses on the relationship between these siblings if there are more members of the family. Booth and Kee suggest that birth order is not the only factor that must be considered in this measurement. For the study to be accurate the size of the family must also be accounted for (Booth & Kee, 2008). While the current available research does provide significant information about the differing roles of siblings, including their respective responsibilities, and what other factors must be considered, there is no research that specifically supports or discredits the impact that siblings have on the language acquisition of one another within impoverished families.

Research exploring the language acquisition of siblings is incredibly important so that teachers, administrators and parents can provide resources and potentially incorporate peer collaboration systems to encourage age-appropriate conversations for those students without siblings. This not only benefits students without siblings, but also those with siblings who will no longer have to participate in learning skills they have already mastered upon entering school. With this research, educators could potentially increase the rigor of English language arts in future years.

Thus, the purpose of this study is to describe the relationship that exists between having siblings and language acquisition in impoverished students within a rural elementary classroom. The following research question will guide the investigation: To what extent does having siblings affect language acquisition in impoverished students in a rural elementary classroom?

Literature Review

Sibling relationships are some of the longest-lasting relationships in a person's life. Positive sibling interactions can enhance empathy and prosocial behaviors (Cao et al., 2020). However, birth order, especially in impoverished families, can impact siblings in distinct ways. In such contexts, younger siblings may benefit from the guidance and support of older siblings, who often take on parental roles. This role shift, however, comes at a cost for older siblings, who may experience reduced educational opportunities and decreased parental involvement.

This dynamic can be understood through several theoretical frameworks. Family systems theory examines how each family member's needs and behaviors affect the entire family. In families facing poverty, parents often struggle to meet basic needs, such as education, nutrition, housing, and healthcare, due to financial strain (Şengönül, 2021). This stress may lead to neglect, alienation, and a lack of engagement with the children, creating an environment where older siblings step in to fill parental gaps.

Bronfenbrenner's ecological systems theory adds another layer by emphasizing the broader environmental influences on family and educational outcomes (Bornstein & Lamb, 2011). Impoverished families often face external stressors such as unsafe living conditions and limited access to resources, which negatively affect their ability to provide educational support. These external factors, coupled with the internal financial pressures described by the family stress theory, demoralize parents, potentially leading to substance abuse and antisocial behaviors (Şengönül, 2021). This reduced parental involvement hampers cognitive and academic development, making older siblings vital to the younger ones' social and educational success. Ultimately, younger siblings may thrive under the care of older siblings, but the broader external and internal stresses placed on the family limit overall academic success, reinforcing the need for holistic family support.

The purpose of this literature review is to examine the role of siblings' involvement as it relates to academic success. I provide prior research from several sources to investigate if there is in fact a correlation between academic achievement and sibling interaction and involvement. Then I provide information related to the level of parental involvement the children receive and how that impacts the amount of engagement between older and younger siblings. Furthermore, I highlight the limitations of existing research on the topic of differing success rates among siblings from impoverished families. I also provide recommendations to support future research on the language acquisition among siblings.

Impact of Poverty on Child Development

Poverty can have significant effects on various aspects of the family dynamic. This section will explore the differing educational outcomes that may stem from being raised in impoverished families. Additionally, this section introduces the varying levels of parental involvement among impoverished families and how that influences language acquisition in the children.

Educational Outcomes

Educational outcomes vary among children from low and high socioeconomic status families. Results show that a major determinant of the inequalities in educational outcomes stem from the SES of the parents (Bredtmann & Smith, 2018). If being raised in an impoverished condition is a repeated family cycle it may increase the likelihood that the children will not have adequate academic support. Additionally, children raised in a home with parents who have a weak educational background do not receive the same vocabulary expansion, working memory, and engagement as those with parents who have strong academic backgrounds (Bredtmann & Smith, 2018).

Children from impoverished families are not only affected by weak parental education but also higher levels of stress than children in non-impoverished families. Studies have shown that children from impoverished families may experience higher levels of stress which can cause struggles with cognition and difficulty with goal-directed behavior and information processing (Baker et al., 2020). This level of stress also prevents proper development of the hippocampus, the portion of the brain that converts the contents of our short-term memory into long-term memory storage (Whitman & Keller, 2016). Without proper development, these children may experience more difficulty grasping and storing new information which is the basis for learning.

Parental Involvement

Parental stress is increased among impoverished families (Şengönül, 2021). This stress can affect children in several undesirable ways. Due to stressors, children from low-income families have been exposed to more unpredictable emotions from parents and other adults (Huang et al., 2022). When parents become frustrated, they tend to treat their children with less warmth, love, and acceptance (Şengönül, 2021). Although this treatment may stem solely from increased stress, children may interpret and internalize those negative emotions from their parents. Furthermore, research suggests that parents' beliefs about their child's educational abilities directly influenced the abilities of the child (Krejčová et al., 2019). This can cause children to develop antisocial behaviors, leading to a lack of communication. Lack of communication can affect a student's academic, emotional, behavioral, and social capacity (Çiçek et al., 2020). Additionally, parents with financial limitations often have less time to devote to academics. Research focusing on parental involvement revealed high-SES parents average 6.9 hours per month compared with 4.8 hours per month from their low-SES counterparts (Perrigo et al., 2022).

Sibling Dynamics in Low-Income Families

The following section seeks to examine the educational benefits that stem from having siblings within impoverished families. Furthermore, this section will dive into the differing outcomes of sibling achievement among these families. It will explore the specific areas in school that are likely to be affected most by sibling interactions.

Educational Benefits

As the longest standing relationship in a person's life, the sibling bond plays a critical role. There is substantial research that positively correlates academic achievement and prosocial behaviors with siblings. Positive relationships with older siblings can help younger siblings to socially develop before entering “real-life” social environments such as daycare or school (Cao et al., 2020).

Additionally, children with siblings tend to experience greater development of Theory of Mind due to regular engagement with one another (Krejčová et al., 2019). Theory of Mind refers to the ability to understand that others’ beliefs, intentions, desires, emotions, and thoughts may differ from one’s own. This development is further encouraged through sibling play (Backer-Grøndahl & Nærde, 2016). Sibling interactions during play have also been linked to increased prosocial behaviors, such as sharing (Xiao et al., 2023). A 2020 study found that being an only child was more common among children with speech and language delays/disorders (Çiçek et al., 2020), suggesting that the absence of sibling interactions may result in slower language development due to reduced exposure to age-appropriate conversations. This lack of regular social exchange not only impacts language acquisition but may also contribute to slower cognitive and social-emotional growth, which are critical to academic success. Children with siblings often benefit from the daily practice of negotiation, problem-solving, and collaboration—skills that are foundational for academic achievement.

Differences Among Sibling Academic Achievement

Birth order, family size, and education all play a role in language development (Çiçek et al., 2020). Some research indicates that older siblings have fewer academic achievements due to an increase in responsibility including leaving school early to help with younger siblings (Booth & Kee, 2008). It is plausible that due to this increased responsibility, younger siblings may benefit from having the engagement, as well as the input and assistance from both the parents and their older siblings (Booth & Kee, 2008). Research shows that the age gap between children is a significant factor as well. Siblings closer in age often share the same academic abilities (Xiao et al., 2023). Children who are born closer in age may also have a stronger relationship with one another so they interact more which can facilitate language development (Gurgand et al., 2022).

Conversely, siblings with bigger age gaps can potentially possess a vastly different set of skills. For example, findings from research on language development show that first-born children were more grammatically advanced while younger siblings had better conversational skills (Backer-Grøndahl & Nærde, 2016). Wider age gaps between siblings have also been shown to have a positive effect on educational achievement among both children (Gurgand et al., 2022). Another factor which impacts the differences in language development is the gender of the siblings. In families where the oldest sibling is male, there is shown to be less vocabulary development among the younger siblings, whereas if the oldest sibling is a female, there is much more (Gurgand et al., 2022). Older sisters may engage in caretaking behaviors more than older brothers, thus providing their younger sibling with more language input, and compensating for the depletion in parental attention (Gurgand et al., 2022). Having this increased language development may assist younger siblings when transitioning into school settings. Furthermore, these children may have an academic advantage as English Language Arts (ELA), a comprehensive subject that encompasses reading, writing, speaking, listening and language

skills, occupies a substantial portion of the yearly learning standards (Truth in American Education, 2024). This subject lays the foundation for effective communication by equipping students with the necessary skills to properly and effectively express their thoughts, ideas, and emotions; making it an essential part of every student's academic journey (Truth in American Education, 2024).

Mechanisms Behind Younger Siblings' Thriving

A possible theory is that younger siblings receive more language acquisition and pro-social behaviors which stem from positive interactions with their older brothers and sisters. However, this section will explore the plausible benefits for all siblings, regardless of birth order.

Role Modeling

In a positive sibling relationship, children can follow the model of siblings' moral behavior acquisition and internalization, which means children could imitate siblings to produce and strengthen prosocial behavior including sharing behavior (Xiao et al., 2023). This also includes other prosocial behaviors such as helping and being helped, which often stem from caregivers promoting self-efficacy. When this is not evident, children tend to have negative social behaviors (Cao et al., 2020). Within the current context, the caregivers are often the older siblings who have increased childcare responsibilities for their younger brothers and sisters.

Sibling Support and Interaction

Positive sibling relationships foster the development of important social and emotional competencies, such as prosocial skills and conflict resolution strategies, which in turn lead to increased prosocial behaviors and reduced internalizing and externalizing problem behaviors (Cao et al., 2020). These relationships can be understood through the lens of *family systems theory*, which emphasizes how the interconnectedness of family members affects the development and functioning of the whole family unit. In the context of poverty, parents often

face difficulties meeting their children's educational and emotional needs due to financial strain, and this is where older siblings may step in to fill those gaps (Şengönül, 2021). When parents are less available, older siblings often take on caregiving and educational support roles, helping their younger siblings navigate daily tasks and school-related challenges (Perrigo et al., 2022).

Additionally, studies highlight that the presence of siblings positively contributes to the development of executive functioning skills, such as working memory, self-regulation, and planning (Backer-Grøndahl & Nærde, 2016). *Bronfenbrenner's ecological systems theory* offers further insight, suggesting that siblings help mitigate the effects of negative environmental stressors, such as unsafe living conditions and lack of resources, which commonly afflict impoverished families. These environmental challenges limit the ability of parents to offer consistent educational support, making sibling interactions even more crucial for cognitive and social development (Bornstein & Lamb, 2011).

Moreover, frequent sibling play provides younger children with opportunities to enhance metacognitive abilities, a critical skill for academic success (Krejčová et al., 2019). This metacognitive growth aligns with *family stress theory*, which posits that external stressors like financial hardship can diminish parental involvement, further reinforcing the significance of sibling support. In cases where parents are absent or unable to engage fully, siblings often assume a critical role in shaping both the social and educational outcomes of their younger siblings. Notably, parents themselves often acknowledge that sibling involvement is essential to their children's development (Perrigo et al., 2022).

Ultimately, while older siblings may significantly enhance their younger siblings' social and academic development, the broader environmental and financial pressures on the family can hinder overall academic success. This underscores the need for a more comprehensive approach

to supporting families in poverty, addressing both external stressors and the internal dynamics within the family unit.

Conclusion

In conclusion, this section seeks to express the limited research that exists in respects to how sibling interactions affect language acquisition among members of impoverished families. The section also lends itself to the discussion of potential future research into the language acquisition among siblings.

Limitations of Existing Research

While there is a plethora of research stating the social benefits of positive sibling relationships, there is very little that examines this under the scope of poverty. This is critical to my research due to the powerful impact that poverty has on children. Poverty hinders children's ability to have positive life experiences, educational transitions as well as life chances and opportunities (Simpson et al., 2017). Additionally, poverty increases the risk of having negative outcomes in education such as low IQs, cognitive development, and social skills (Şengönül, 2021). These facts make poverty a substantial factor in the research on impoverished children's differing abilities and educational outcomes. Furthermore, there is very little research about the educational benefits that stem from sibling relationships.

Directions for Future Research

If we are to truly examine the effect that older siblings have on their younger siblings in impoverished families, the research must include a wider range of participants. The lives and experiences of all children are vitally important to understanding the nature of poverty and its effect on children (Simpson et al., 2017). Future research should also focus on the educational data obtained from single child impoverished families. This is necessary to critically examine whether children are truly advantaged by having older siblings or if their success is a result of

resilience. Resilience is the ‘outcome of dynamic developmental processes rather than an observable personality trait of an individual’ and is claimed to provide young children in poverty with ‘the capacity to cope with life’s setbacks and challenges’ (Simpson et al., 2017).

Methodology

For this research, I used a qualitative approach to understand the effects that siblings in impoverished families have on one another, in specific regards to language acquisition. This methodology was chosen as the research aimed to obtain detailed information about a few people rather than collecting data from a large pool of participants (Creswell & Guetterman, 2019). Additionally, this research is focused on developing an in-depth understanding of a central phenomenon and capturing the participants personal experiences (Creswell & Guetterman, 2019). Throughout this research I explored the shared culture of a specific group of people which is exclusive to the qualitative methodology (Creswell & Guetterman, 2019).

A case study using an ethnographic design was used for this research. Ethnographic designs are qualitative procedures for describing, analyzing, and interpreting a cultural group's shared patterns of behavior, beliefs, and language which help to develop a portrait of how they interact with one another (Creswell & Guetterman, 2019). This research design is optimal due to the studies focus on examining one group of individuals in the settings where they live and work (Creswell & Guetterman, 2019). More specifically, this research was explored through a case study focused on the members of one family.

Participants

A family of five was invited to participate in this study. The family consists of a father, mother, and three children. Pseudonyms were used to protect the identity of the participants in this study. When the research took place, the eldest child, John, was 7 years old and in the second grade. The middle child, Jane, was 6 years of age and in the first grade. The youngest child, Jill, was 5 months old during this case study. This family lives below the 200% poverty line, which concludes that they have an annual income of \$36,580 or less (U.S. Department of Health & Human Services, 2024). Both parents obtained a high school diploma as their highest

level of education. While the primary sources of data for this research were collected from the family, there was also academic information provided from the first and second grade teachers who also participated in this study.

Context

This study was conducted primarily in a rural community in the United States. This community houses 29 schools with a population of 19,705 students (U.S. News Education, 2024). Of these schools, there are 17 elementary schools, which is approximately double the amount of preschools, middle schools, and high schools in the area. The elementary school that I pulled my participants from has a population of slightly less than 1,000 students (U.S. News Education, 2024). Similar to the district, there is a student-teacher ratio of 15:1. There is nearly an even split of girls and boys that make up the student body (U.S. News Education, 2024).

Upon investigating the diversity among the students attending this school, research revealed that 45.4% are white, 22.3% are Hispanic/Latino, 20.6% are Black, 9% are two or more races, 1.5% are Asian or Pacific Islander, 0.6% are Native Hawaiian, and 0.5% are American Indian or Alaska Native (U.S. News Education, 2024). Additionally, there is a variation in student enrollment amounts by grade level, with kindergarten having the highest numbers (U.S. News Education, 2024). Conversely, fourth grade had the lowest student enrollment (U.S. News Education, 2024). The typical classroom has anywhere from 16-22 students.

In John's 2nd grade classroom, the students each had their own individual desk which had a connecting metal basket underneath for storage of books and classwork. The desks were triangular in shape, which allowed for them to be pushed together in groups of four to form a larger square table. There were five of these square tables made up of twenty individual desks strategically placed throughout the classroom. John's seat was located closest to the teacher's kidney shaped table, which was stationed directly behind his desk. This area is where the teacher

spent the most time during all three researcher observations. There was also a large rectangle table centered at the rear of the classroom next to the students' cubbies where I sat to conduct the observations. At the front of the room, there were two large rectangular white dry erase boards with a smart tv mounted right in the center.

In Jane's 1st grade classroom, a majority of the students were seated at petalled tables that looked like flowers. These tables comfortably fit six students. There were three of these flower tables staggered towards the back center of the classroom. There were four additional single-student squared desks. Two of these desks were stationed to the left of the entrance of the classroom, right on the edge of the walkway into the cubby area. The other two desks were on the opposite side of the room on either side of the rectangular desk occupied by the teacher's assistant. In the front center of the classroom, there was a large colorful rug with numbered squares. Identical to all the classrooms in the school, the front wall was covered by a mounted smart tv, surrounded by two white, dry erase boards. The teacher's kidney shaped desk was located in the front right corner adjacent to the board. Jane sat at the circle table located at the right side of the classroom closest to the entrance. I used one of the unoccupied single student desks by the cubbies to conduct the research observations.

Procedures to Obtain Consent

This study required several steps in an effort to conduct research on the language acquisition and relationship between siblings. The first step was to receive permission from the principal so that I could conduct this study within the school (see Appendix A). Next, I obtained permission from the county (see Appendix B) and submitted my proposal for IRB approval. Upon the approval of the study (see Appendix C), I then invited the students, their teachers, and their parents to participate in this study. I provided the teacher of each student with approval forms for permission to conduct research in their classrooms (see Appendix D-E). Following

teacher approval, I provided a consent form for the teachers to participate in the study (see Appendix F). I then sent home parent consent letters for the participation of the students (see Appendix G-H). I also talked with each student, and they provided verbal assent (see Appendix I). In addition, I provided the parents with consent forms for their participation in the study (see Appendix J). I kept a record of each participant who accepted the invitation to participate in this study, and I was careful to only collect data from those individuals.

Data Collection

I began collecting data through interviews with the teachers of the siblings. The purpose of this initial interview was to collect information about the teachers' existing observations of the child. I used an interview protocol that I had created to collect the data (see Appendix K; Creswell & Guetterman, 2019). Additionally, I discussed methods to strategically schedule appropriate and effective times to come into the classrooms and observe the students. In collaboration with the teacher, I mapped out three windows of time for the 15- to 20-minute observations.

Following the initial interview of the classroom teachers, I began formal observations of the siblings. I observed each student three times during scheduled windows of time previously discussed during the initial interviews with the teachers. Those times included small group interactions, whole group interactions, and one-on-one interactions between the student and teacher. I used descriptive and reflective field notes to collect data on an observation protocol I created (see Appendix L-M; Creswell & Guetterman, 2019). During this time, I observed the vocabulary of the students and their ability to effectively communicate their needs and ideas. I also observed their contributions to classroom discussions and their social-emotional development.

Next, I obtained mClass vocabulary assessment data for each of the students from their cumulative folders in the front office of the school. This is a state test created by Amplify (Amplify Education, 2024) which provides the students with comprehension-based questions to assess their knowledge of key vocabulary words. I obtained both students' scores from kindergarten and first grade to compare their scores at the same grade level. I used hand-written notes about the assessment scores as my source of data.

I concluded my data collection by hosting several post interviews with the siblings, teachers and parents. I used an interview protocol I created to collect additional data from the teachers (see Appendix N). The teachers were asked questions related to strengths and weaknesses of the student's language development. I then used an interview protocol I created to collect additional data from the students (see Appendix O). The students were asked questions relating to their relationship with their siblings. Additionally, during this post interview I used clarifying and enhancing probes to better understand and validate the observations collected throughout the study. I then hosted a telephone interview with the parents of the students using a separate interview protocol I created (see Appendix P). The parents were asked questions that reflect the siblings' interactions within the home. During each of the interviews, I used an audio recording to ensure an accurate record of the conversation. I later transcribed the recordings to prepare for analysis.

Data Analysis

I began the data analysis process by first preparing and organizing all of the information and data sources. I sorted them by data types (i.e., observations, interviews, documents). The documents were initially stored in a locked file drawer located in my classroom. However, upon transcription of the data sources, I began storing the data in a password protected electronic file and subsequently shredded the physical copies. I then read carefully through all of the data to

gain a general sense of the material and began coding it (Creswell & Guetterman, 2019). I utilized handwritten notes and an excel spreadsheet, which allowed me to assign labels/codes, organize the data, and facilitate searching through the data more quickly (Creswell & Guetterman, 2019).

I began with the descriptive and reflective observation notes collected. While reading through these notes, I began pulling out key phrases and patterns in behavior from both students, while arranging them by the frequency in which they occurred. Once I had exhausted all possible descriptive and process codes from this data source, I moved forward to repeat those steps while analyzing the multiple interviews I had conducted. Through this process of triangulation, many codes began to overlap and several themes began to emerge with increased validity. For example, while reviewing the data from Jane's observations, I began developing several descriptive codes including, hand holding, prompting, watching and approval seeking. I moved forward to analyzing the teacher interview for the same student and noticed the new codes included, needful, mimicking, relying and support seeking. I continued on to collapse these codes into themes of dependency and the follower. Additionally, during this step I began to notice strong connections to my initial predictions and information presented in the literature review.

At this time, I also began considering the unexpected changes to the observation schedule and interpreting whether that had a profound effect on the overall findings. Initially, the observations were to be conducted within a one-week time frame to further reduce the Hawthorne effect. However, due to unexpected inclement weather, the observations were conducted over a two-week span. Through the use of member checking, I found that the behaviors observed were consistent with normal classroom interactions and my interpretations of

the behaviors were valid. I also gained more data to support the emerging descriptions and themes.

I continued on to analyze the documents transcribed from the students' mClass scores. These data proved to have several limitations including an inability to comprehend the setting in which the test took place and the overall effort and attentiveness of the students at that time. Furthermore, both students were given instructions for the test by different teachers which could have a substantial impact on the results of the assessment. It was determined that the scores were not an appropriate and accurate reflection of the vocabulary development of the students. Following this process of analyzing the data, checking the sources for validity, and reducing the information into themes, I began representing my findings through narratives and visuals and interpreting the meaning of the results (Creswell & Guetterman, 2019).

Trustworthiness

There are several methods I used to increase reliability and validity throughout this research process. Following the observations, I met with the classroom teachers to discuss and verify the accuracy of the collected data. I also performed these member checking techniques with the students to ensure that I am interpreting their verbal and nonverbal cues accurately as well. Additionally, I utilized triangulation to cross-check the findings and to build a more in-depth understanding of those findings. I achieved this by using multiple data sources including several observations and interviews. Member checking and triangulation also aided in decreasing biases during this case study. Furthermore, I sought to reduce the Hawthorne effect by observing the children on multiple occasions within a small window of time.

Findings

The research question addresses how sibling relationships affect language acquisition in impoverished rural elementary schools. The findings are organized by two themes that emerged from characteristics of each sibling: The Follower and The Leader. Detailed descriptions of how the siblings demonstrated the characteristics are reported as sub-themes, and connections are made to each student's language acquisition.

The Follower

This theme of The Follower emerged as a result of the data collected for Jane, the younger of the two siblings. The Follower demonstrated behaviors such as mimicking, approval seeking, and watching. These behaviors impact language acquisition because of a dependency on others. Although Jane is able to communicate using complex sentences, her comprehension abilities are significantly hindered by her support-seeking habits. In the following sections, I will describe how Jane demonstrated the characteristics of The Follower and how her dependency on others impacted aspects of her language acquisition.

Mimicking

The behavior of mimicking portrayed by Jane is best described as imitation and/or copying the actions and words of others. Following the initial interview with Jane's teacher, I began conducting my first observation. Upon entering the classroom during the early hours of the school day, I noticed Jane was holding another student's hand while walking to the colorful rectangle carpet in the front of the room. The two girls sat down on numbered squares next to one another and continued to hold hands throughout the lesson. The teacher read a story about how things can go wrong when someone is rushing. She then asked if anyone had examples of themselves making a mistake while rushing. Several students raised their hands to answer the question. However, Jane did not raise her hand until the student she was holding hands with

raised hers first. The teacher called on Jane to answer, however Jane did not speak a word during the entire 45 second waiting period the teacher provided. The teacher later expressed to me during our post interview that Jane typically does not respond when asked questions in a whole group setting. This revealed that although Jane has implicit knowledge, she is either unable or unwilling to express her learning during formal situations within the classroom.

During Observation 2, the teacher said to the class, “Get your iPads out and go to iReady reading. Complete the first lesson.” The students all began to grab their iPads and log in. Jane looked to the student she was holding hands with during the previous observation. As the student got her iPad out, Jane got hers. Jane looked to the student as she was reaching for her QR code, then Jane grabbed her QR code. As the student began to press buttons on her iPad, Jane continued to mimic her by pressing the same buttons until they were both logged in. It was initially unclear if Jane was actually copying the other student until the teacher began to walk around the classroom and asked, “Jane why are you on iReady math? What did I tell the class to do on iReady?” Jane responded, “iReady reading.” The teacher then asked again, “So why are you on math?” Jane glanced over at the student next to her who was in the process of switching from math to reading on her tablet. The teacher seemed to have noticed the silent queues and stated, “This is why we shouldn’t be copying what other people are doing,” and then she walked away. This occurrence served as a prime example of how Jane’s dependency on others hinders her opportunities to exercise not only her listening comprehension skills, but also her ability to follow instructions and execute a classroom task.

While conducting the parent interview, I asked the parents to tell me about the type of language used in the home. The mom stated, “Sometimes when I have a conversation with Jane she sounds just like John. I don’t always know if she really understands some of the words that she uses because she will say them in the same sentence that John does. For example, the other

day John told me that he was craving burgers for dinner. Jane came right up to me next and said she was craving burgers for dinner. She doesn't even like burgers." After being prompted to tell me more about this phenomenon, the parent stated, "Jane will pretty much do and say anything that John does. It's not just John either, she copies everything that I do too. She's like a little shadow." Although language acquisition is based upon absorbing information and language through daily interactions, the mimicking and imitation stages are usually seen during the first couple years of life, whereas Jane is demonstrating these behaviors at 6 years old with significant frequency.

Approval Seeking

The behavior of approval seeking as depicted by Jane is best described as pursuing validation before, during and after any action. During Observation 3, the teacher called Jane over to the kidney shaped table to do "word work." Jane walked to the table and stood silently looking at the teacher until she motioned for Jane to sit. Upon sitting the teacher says to Jane, "We are going to look at some words." She then lays several small foam letters on the table between her and Jane. Manipulating the letters to form the word "bus," the teacher slides the pieces closer to Jane and asks her to read the word. Jane began to look at the word while silently moving her mouth, seemingly stretching the letter sounds to form the word. Jane then looked directly at the teacher and sat silently until the teacher said, "Tell me the word please." Jane then spoke, "bus." As the teacher continuously altered the letters to make new words, the same prompting was needed each time before Jane would answer. Once the observation was complete, I spoke with the teacher to ask her if she requires the students to wait before sitting at her table. The teacher responded, "I absolutely do not. She just needs my consent for some reason." Jane showed appropriate comprehension skills by completing the "word work" as directed by the teacher.

However, she displayed a delay in her expressive abilities by hesitating to use her words to vocalize the answers.

While conducting the final teacher interview, I posed the question, “What are some strengths and weaknesses in relation to language acquisition that you have seen from this student?” The teacher stated that “Jane is a good conversationalist. When she’s talking to her friends, she can accurately and clearly express her thoughts and ideas. However, I will say that she hesitates often when she is speaking.” I prompted the teacher for additional details, and the teacher replied, “She will literally stop speaking in the middle of her sentence sometimes. She always seems kind of timid, sort of like she is afraid that she is saying or going to say the wrong thing.” This seemed to be related to an impediment involving the segment of language acquisition also known as pragmatics, appropriate communication in social context. Due to a possible lack of pragmatic abilities, Jane displayed a deficit in either knowing what to say, when to say it, or how to say it. It is also possible the hesitancy originates from a lack of confidence in herself, stemming from the abundance of support she normally receives from John.

Upon conducting the final interview with Jane, there were numerous instances of Jane seeking my approval. For each question I asked, Jane required substantial prompting to receive full, thorough answers. For example, after asking the first question, Jane looked at me and remained silent for a 30 second span of time. I then said to her, “You can answer, it’s okay.” After that confirmation Jane began to speak. This happened several times during the interview. After the first two questions with Jane pausing before answering the questions, I began to use nonverbal cues such as shaking my head in a “yes” manner when she would pause. This method of approval also induced a response from the student. This interview raised the additional concern of whether Jane is experiencing a delay in receptiveness, listening to what others are

saying, and/or expressive language, responding appropriately to what was said, during these hesitations.

Culmination of Behaviors for Dependency

Each of the characteristics demonstrated by Jane all meshed together to evolve into an overarching sub theme of dependency. The role of The Follower is classified by the significant reliance on The Leader for support and guidance. Jane frequently mimics the behaviors and movements of other students in the classroom. In addition to mimicking, Jane also watches and waits for approval before doing things within the classroom. During Observation 1, following carpet time, the teacher gave explicit instructions about what the students were to do next. She stated, “Walk quietly back to your seats and get out your writing journal. Write down a few sentences about a time you were rushing and made a mistake.” Upon returning to her seat, I noticed that Jane sat quietly looking around the room.

The student next to Jane on the left side raised her hand and the teacher motioned for him to come over to her table. Jane then stood as well and walked over to the teacher's kidney shaped table behind the student. The student then asked the teacher, “What do we write about?” She explained once again, “Write a few sentences about a time that you were rushing, moving really fast, and it caused you to make a mistake.” The student turned to walk back to his seat and Jane also walked back to hers without ever speaking to the teacher. Once she returned to her seat, she began writing. After observing this interaction, the depths of dependency that Jane displays within the classroom were revealed. She frequently relied on the direction and assistance of others as well as preferred to stand by quietly while allowing others to ask questions. Due to this dependency, Jane remained in what is referred to as the speech emergence stage of language acquisition. In this stage, although Jane had several thousand words in her vocabulary, she is still relied heavily on context clues during conversations and interactions. She was able to understand

what others were saying but had not yet gained the confidence to fully express her own thoughts and opinions as well as apply higher order thinking which is required to master this level of acquisition.

Additionally, during the post interview with Jane, I asked her, "Does your sibling help you learn?" Jane simply responded, "Yes." With further prompting she replied, "He sings the alphabet to me. He counts to one hundred for me. He helps with my homework, and he did my Scholastic News for me." During John's post interview he confirmed by answering the same question. John stated, "No, I help her learn. I do her Scholastic News. I even help her learn math, and she always needs me to read for her because I'm smarter." It became apparent at this time that Jane and John were both aware of their standing in the siblingship in relation to dependency. Jane acknowledged that she depends on John for academic support and John acknowledged that as well. During the parent interview, the mom also stated that Jane prefers John to help with her homework assignments.

The Leader

This theme of The Leader emerged through analyzing the data collected from John. The Leader demonstrated behaviors such as control, informing, and gratification. These behaviors impact language acquisition because of the burden of increased responsibility. Although John is able to comprehend grade level appropriate text and directions, his communication abilities and social emotional skills are severely lacking due to a desire and need to be in control. In the following sections, I will describe how John demonstrated the characteristics of The Leader and how his increased responsibility for others impacted aspects of his language acquisition.

Control

The controlling behavior as demonstrated by John is best described as the desire to direct and heavily influence the actions and ideas of others. During Observation 1, upon my entry into

the classroom the students were involved in a group discussion about a passage that had just been read by the teacher. The passage was displayed on the Smart TV in the front of the classroom. The teacher prompted the students by asking, “What was the girl doing in this story?” Immediately, several hands went up in the air, including John’s. The teacher scanned the room and called on a student who gave an answer. This subsequently initiated a deep sighing noise from John, who called out, “Hey, I wanted to answer it.” The teacher then went over to him and spoke to him quietly. I later asked her what she said to John. She informed me that she told him to “Remember there are other students in this classroom. I cannot call on you for every question.” John's ability to accurately and purposefully voice his concerns and thoughts revealed that he was well into the fourth stage of language acquisition, known as intermediate fluency. In this stage, students can spontaneously engage in classroom dialogue as well as other random social situations.

During this same observation, the teacher began giving out Dojo points to students. After later inquiring about the Dojo points, I was informed that it is a method of rewarding students who are making good choices. There are numerous ways to earn these points, including staying on task, working quietly, and helping others. At the end of the week the Dojo points earned will afford the students a prize of their choice. During this particular observation, the points were being rewarded for working quietly and being on task. As the teacher continuously scanned the room for students to give a point to, John was staring at the Smart TV which showed the points going up. After approximately six students were awarded points, John said aloud, “You need to give me a point too.” This led to the teacher requesting he come to her table. I later inquired about their conversation. She replied, “Essentially, I told him that he doesn’t tell me what to do. I told him to let me be the teacher and he should try just being the student.” At the fourth stage of language acquisition, intermediate fluency, the capacity to quickly and accurately assess

nonverbal cues are a major determinant of mastery. Although John's outburst was a less than desirable social-emotional response, he revealed an immense ability to use social context and nonverbal cues to initiate a valid and concerning issue to his teacher.

While conducting Observation 2, the students were all quietly working on their iPads. A student who sat adjacent to John raised her hand. The teacher was occupied with a student at her table and informed the waiting student that she would be with her soon. John looked up from his iPad and leaned over the desk to grab the iPad from the student with their hand raised. He began pressing a button when the student called out, "He took my iPad." The teacher stood and walked over to their combined desks saying, "Why did you touch her iPad?" John then returned the iPad to the student. The teacher asked the same question again. This time John shrugged his shoulders and said quietly, "She had her hand up, so I helped her." The response given by John was so natural and immediate. It divulged the extent of his ability to use language in the academic setting while maneuvering effortlessly through questioning. John's capacity to swiftly and intellectually respond to those questions reflects a near proficient standing in the fifth and final stage of language acquisition, advanced fluency.

To gain more information about this characteristic of control, during the parent interview, I asked for substantial detail specifically in regard to the fifth question. The question stated, "How would you describe the relationship between the siblings?" The parents replied "Like any other siblings, they do fight occasionally. John is very protective of Jane and Jill. He tries to be the parent instead of the brother. John is very dominant, but they still have a great relationship." This information led to the theory that John may experience more success in his language abilities due to his increased role in explaining and relaying information to his younger siblings. John not only is required to have the capacity to comprehend and communicate his learning, but he has also taken on the task of simplifying academic and personal language to a degree in which

his siblings can understand. This skill requires a culmination of several language acquisition skills which are typically only possessed by individuals who have nearly mastered the language.

Informing

The behavior of informing is shown through the act of giving someone relevant information. This action can be displayed across several scenarios, including personal and academic social situations. During Observation 1, the students were instructed to read a new passage in the workbooks in front of them and answer the questions in complete sentences. The students were all working silently when John began to look around at the work of the students whose desks were connected with his own. He then spoke loudly, “No, she said we are supposed to write in full sentences. You just wrote two words.” The sudden noise caused most of the students and the teacher to look over to where he was seated. He then repeated, “We are supposed to write in full sentences, he only wrote two words.” The classroom teacher responded, “Worry about your own work. You shouldn’t even be looking at his paper.” John released a deep breath once again and began working on his paper. Once again, John's outburst earned him a less than desirable response from his teacher; however, he displayed advanced fluency with his capacity to incorporate his well-roundedness in language skills. Within this scenario, John displayed proficiency in listening and speaking skills by not only comprehending the verbal instructions given but understanding them well enough to relay them to another student while including the context of what they were doing wrong. Additionally, the situation showed John's skill level in reading. After only a brief moment, he had read what the other student had written down and comprehended it well enough to offer suggestions for improvement. The typical measurement of proficiency in language acquisition is rooted around the ability to apply multiple academic skills simultaneously. During this observation, John was able to accomplish this feat seemingly without much effort.

Gratification

Gratification, as used in this context, includes the behavior of seeking reward or acknowledgment for completing tasks or displaying appropriate habits. During Observation 2, the students were going over the questions they had answered individually on their iPads. The teacher read each question aloud and called on a student with their hand raised to answer the question. The second question she asked was, “What does the word sequence mean in this passage?” John, who had raised his hand for both the first and second question, was called on to answer the question. He stated, “It means in order.” “That is correct,” the teacher said, followed by the reading of the third question. Before she was able to finish reading the question, John asked, “Can I get a Dojo point?” She replied, “A Dojo point for what?” John then said, “I got the question right.” After later conferring with the teacher, it emerged that John often seeks out immediate reward or praise for doing what is expected of him. John’s capacity to comprehend academic vocabulary, such as sequence, further highlighted his proficiency in the language. Additionally, John was able to appropriately utilize expressive and reflective listening and speaking skills in the exchange with his classroom teacher. He used clear and concise language to address his concern within a situation that warranted discussion.

During Observation 3, this phenomenon of seeking gratification became very apparent. Throughout the entire observation, John showed very little interest in participating in the lesson. He laid his head down on the desk fiddling with his pencil for the first five minutes. He then spent the next several minutes twisting and picking at his fingers. The teacher did not seem to notice, as she was occupied with reminding the rest of the class to stay quiet and pay attention as their fellow classmates were giving answers to her questions. After several reminders, the teacher switched the screen from the lesson to the Dojo point board and began rewarding those who had answered previous questions. Immediately, John's hand was raised and when called

upon. The teacher said, “Yes, John, what do you need?” He stated, “I was going to answer the next question.” She read out the question, and John was able to answer it correctly. However, she did not award him a Dojo point. After inquiring about his point, the teacher responded, “Those points were for my friends who were doing the right thing the whole time.” Before John could respond, the teacher looked away and began pressing keys on her laptop. John then put his head back down on the desk and began using his pencil to poke at his hand, seemingly uninterested in the lesson once again. The context of this exchange called attention to John's abilities in relation to nonverbal communication. Instead of responding and potentially initiating a debate, John picked up on the body language, tone, and lack of eye contact from his teacher, which informed him that the conversation was over. Nonverbal cues are typically the easiest to misunderstand, therefore they require a higher order of thinking to successfully interpret. John's ability to achieve this feat further highlights his capacity for higher leveled language acquisition.

Culmination of Behaviors for Responsibility

John's recurring behaviors and characteristics all seemed to stem from this sense of responsibility he possesses. One particularly interesting piece of data that stood out in relation to this phenomenon occurred during the post interview with this student. After the first question, “How do you feel about your relationship with your sibling?” John replied, “Good, Jane is my best friend, but she is annoying sometimes because she always needs me to help her and do stuff for her.” Furthermore, when John was asked who takes care of him at home, he replied, “Mom and dad take care of me. I take care of Jane.” After being prompted to tell me more about that, he shared, “I take care of Jane by answering her questions about how to do something.” Through these responses, that sense of responsibility continued to be emitted strongly. Moreover, it became evident that John receives substantial practice with language skills including

comprehension, communication, and critical analysis in an effort to answer the many questions posed by Jane.

When analyzing the overall traits and behaviors of The Leader, including control, informing and gratification, they all led back to responsibility. John had expressed the influence and duty he felt in regard to Jane's education, which then spilled over to his peers within the classroom. John continuously exhibited these behaviors of authority and power while also seeking a reward of some sort. Additionally, John had the comprehension abilities to understand and express to peers what the adult in question, teacher or parent, was attempting to relay to the children. He then utilized his advanced comprehension capacity to take control of the learning opportunity for Jane, as well as other students within his classroom. During the parent interview, it was also stated that he is beginning to talk to his 5-month-old sister, Jill, and explain different things to her as well. John's increased language capacity allowed him to alter his communication techniques to utilize vocabulary and tones that are appropriate across different social settings.

Discussion

Through careful analysis of the findings previously discussed, the data reflect that although Jane is more dependent and relies on significant guidance, she possesses grade –level-appropriate conversational abilities with increased social-emotional awareness. Conversely, John has very solid comprehension and communication abilities which contribute to his aptness and willingness to assume responsibility for the learning of others. However, that sense of responsibility can often surface as an undesirable trait, such as control. By examining the strengths and weaknesses of both The Follower and The Leader, it became apparent that there is a significant need to find a balance between the two. While both students are making average academic progress, it is possible that with adult guidance and intervention they both could thrive in the respective language acquisition domain they have yet to master. There are methods which can be applied in the home, as well as the classroom, to support this intended growth.

Language Acquisition at Home

Positive relationships with older siblings can help younger siblings to socially develop before entering “real-life” social environments, such as daycare or school (Cao et al., 2020). This becomes apparent through Jane’s superior ability to calmly converse and express her wants and needs. Additionally, this phenomenon was explored in past research, which found that first-born children were more grammatically advanced while younger siblings had better conversational skills (Backer-Grøndahl & Nærde, 2016). However, in this specific study it was also noted that Jane would hesitate when having conversations, although she was more than capable. This led to questions of whether she was afraid to say the wrong thing or if it was simply a lack of confidence on her behalf. Admittedly, Jane, John, and their parents expressed that John continuously provides significant support for Jane, which leaves very little opportunity for Jane to thrive independently. By pulling back and removing a portion of the support given to Jane, her

confidence with conversational skills and her ability to comprehend could potentially soar to new heights.

Within the home, implementing productive struggle strategies could greatly benefit Jane's language acquisition. Productive struggle entails allowing Jane to think flexibly and apply effort into finding the correct answers and actions on her own or with questioning and minimal prompting. Questioning helps students organize their thoughts as they struggle to make sense of problems and words (Edwing et al., 2019). This strategic challenge will prompt Jane to rely on her developing skills, to think critically and respond appropriately in social and academic situations. One method to encourage productive struggle is to provide adequate wait time before assisting Jane with support. By allowing Jane more time to reflect on the appropriate response and to think critically, she may further develop her abilities in reflective and expressive language and begin applying both more fluently and independently.

Another method for encouraging language acquisition in Jane is to consistently ask questions and narrate parts of the normal daily routine. For example, when Jane is performing day to day actions, such as playing, completing homework, or eating dinner, it is great practice to routinely ask questions to spark conversation. By asking questions that initiate meaningful conversations, it is possible that Jane's confidence and capacity to engage in age-appropriate dialogue could improve. Furthermore, by narrating events throughout the day, Jane's receptive language skills, including the ability to understand and comprehend, will further develop and increase her overall standing in relation to language acquisition.

Comparatively, some research indicates that older siblings have fewer academic achievements due to an increase in responsibility, including leaving school early to help with younger siblings (Booth & Kee, 2008). Throughout this study, John showed tremendous potential with his advanced comprehension abilities. John demonstrated mastery in several

language acquisition skills across multiple domains including reading, speaking, and listening. However, his academic talent is seemingly overshadowed by the undesirable traits of control that often surface. In spite of John's intentions, the increased responsibilities he shoulders at home brim over into his behaviors and participation within the classroom. In many of the observations, John's abilities were only revealed within the context of him taking responsibility for someone else's learning, rather than embracing his own. With all things considered, the evidence points to John possibly experiencing additional academic success as well if his responsibility to Jane were to be alleviated.

A method that could be applied in the home includes requesting that John receive higher level homework that challenges his language skills adequately. As previously stated, John shows a tendency to express his abilities through taking responsibility for the learning of others. If John were to be presented with his own learning challenges, he could redirect his focus on others and apply it to himself. This can be accomplished through requesting that John be given third grade reading leveled texts that include vocabulary and sentence strings he has not yet been exposed to. These texts should also be followed by rigorous open-ended comprehension questions which test his understanding and critical thinking. By providing this academic challenge for John, his language development will not only improve, but also his previously substantial time spent supporting Jane will decrease as he works to build his own advanced language skills during homework time. Additionally, having a conversation with John about Jane's need to develop her own problem-solving skills and confidence could also be very helpful. In this manner, John will possibly avoid feeling the "lack of control" and instead understand that it is potentially best for Jane and others to engage in productive struggle.

Language Acquisition in the Classroom

There are several factors that can affect language acquisition among students. In previous research it was found that children raised in a home with parents who have a weak educational background do not receive the same vocabulary expansion, working memory, and engagement as those with parents who have strong academic backgrounds (Bredtmann & Smith, 2018). In this particular case study, the parents' educational background does not seem to have an effect on John's language acquisition. However, Jane did not show the same level of working memory, including the ability to follow directions and/or keep track while having a conversation. This may be due to a different level of parental involvement among the siblings due to birth order. As previously stated, birth order, family size, and education all play a role in language development (Çiçek et al., 2020). John, being the eldest child, could have potentially benefited from additional interactions with the parents before Jane was born, thus increasing his language development in early years. However, further research is required to confirm this theory. Acknowledging the connection between language acquisition in the home and language acquisition in the classroom can assist in navigating efficient teaching strategies. Additionally, as an educator, recognizing the students who come from low SES families with weaker educational backgrounds could allow for more personalized instruction which targets these deficits.

Within the classroom, Jane could benefit from one-on-one instruction which compels her to rely on her own skill and understanding of the task. This strategy is supported by Sarama et al., (2021) who states it may be that any one-on-one attention yields greater performance. Furthermore, with one-on-one instruction, the teacher can better deduce if and where the deficit in pragmatic abilities, knowing what to say, how to say it, or when to say it, arises for Jane. This method of promoting independence could also be intensified by having students work in small groups and be assigned roles within the group. Jane could be assigned a particular role that

would require her to report the group's ideas to the class. This activity could assist Jane with further developing her communication skills and building stronger listening comprehension before working independently.

Jane's language acquisition could also benefit from "turn and talk" partner methods. During "turn and talk" the students each pick a partner whom they must work with throughout the duration of the activity. Once the students are all in groups of two, they are then labeled as either partner A or partner B. At that point, the teacher will ask an open-ended question and pick either partner A or B to tell their answer to the other group member. The partner receiving the answer must then recite what the other person said back to the teacher in their own words. The teacher will then periodically switch the roles of the group members and proceed with the remaining questions. Turn and talk may be especially powerful, because asking a child to explain why, to describe something, and/or to talk more about something can encourage deep thinking and complex talk about the topic (Hindman et al., 2022). This activity also promotes receptive listening skills which are crucial to effective communication as well as expressive speaking skills including describing, narrating, and the use of appropriate vocabulary and grammar. Furthermore, this sequential reciprocity involves more than just turn-taking, since the listener is also performing an active listening activity concomitantly with the speaker. Moreover, the speaker and listener exert mutual influence upon each other simultaneously and successively during conversations (Kwak, 2023).

Although John is doing very well academically in relation to his language acquisition skills, there are ways in which his abilities can be further developed and enhanced. At this point in John's development his language skills can start to become more abstract and complex. The next major developmental milestone could focus on analytical skills including collecting information, processing it, and forming relevant conclusions. Analytical reading is a cognitive

skill that stimulates brain work. It refers to an ability to approach a text critically by giving priority to the objectives that the author might have (Verhovtsova et al., 2022). John has demonstrated that he is able to comprehend narratives and stories well enough to answer a series of questions that reflect what was said or read. By providing John with supporting details and information about a particular topic and encouraging him to draw his own conclusions, his critical thinking and analytical skills could develop substantially.

Furthermore, John has shown a slight need for an increase in his pragmatic and social-emotional skills as well. Knowing what to say, when to say it, and how to say it, goes beyond the initial deficit that was displayed by Jane. Speaking with the correct tone, body language, and in a way that is received well, is also an important developmental language acquisition ability. Nonverbal communication is a message source that provides important clues to the receiver in interpreting the verbal messages coming from the source element in communication. Thanks to nonverbal communication, communication between people becomes reliable and effective (Atici, 2024). To promote and further develop these skills for John, role-playing could potentially catapult him into language acquisition mastery. By providing John with a plethora of different social, professional, and academic scenarios while encouraging him to respond appropriately, the undesirable responses shown during the observations could potentially cease to occur.

Implications for Further Research

This paper started by posing the following question: Does having siblings actually make you smarter? Throughout this case study, the phenomenon and dynamics of siblingship was analyzed in an effort to better understand how and to what extent does having siblings affect language acquisition in impoverished students in a rural elementary classroom. The influence for this study stemmed from the vast differences in language abilities among students of the same age and similar economic backgrounds. These differences revealed a need to further investigate

factors that contribute to language acquisition in students, including the possession of siblings. Furthermore, by developing a better understanding of how having siblings affects language acquisition, additional practices and resources could be put in place to support greater language development and increased ELA rigor within schools.

Upon completion of this study, I found each sibling's language acquisition abilities were affected in different ways that were not solely positive or negative. For instance, one student showed substantial dependency and relied heavily on the support of others, while exhibiting limited language acquisition abilities. Conversely, the other student conveyed increased responsibility for others and often took charge of their learning opportunities, all while portraying advanced language acquisition skills. Through these findings, it became apparent that students take on different roles in sibling relationships, which greatly affect their capacity for appropriate language development.

Additionally, further studies are required to validate claims investigated from prior research. For example, in families where the oldest sibling is male, there is shown to be less vocabulary development among the younger siblings. Whereas if the oldest sibling is a female, there is much higher levels of vocabulary development (Gurgand et al., 2022). While there was conclusively less vocabulary development shown from Jane, a comparative case study focusing on a family with a female eldest child, could substantiate this observation. Similarly, previous research stated that siblings closer in age often share the same academic abilities (Xiao et al., 2023). This was revealed to be inconsistent within the context of this particular study where John showed substantially more advanced language abilities than his sister, who is a year younger than him. However, due to the limited participants involved in this study, it is unclear if this family is the exception or if this phenomenon of siblings sharing the same abilities is dependent upon family dynamics and other contributing factors.

Future research should also seek to further investigate the connection between social-emotional development and language acquisition among siblings. As revealed in this case study, social-emotional development can be a major factor in communication and comprehension abilities. Perceiving tone and body language remains a vital skill of communicating effectively. Without proper social-emotional development, this skill is difficult to master and can often result in misunderstandings as well as difficulty participating appropriately in social and academic interactions. Therefore, social-emotional development should be examined further when studying students' language acquisition and effective communication.

Conclusion

Language acquisition may be significantly impacted by sibling relationships. This study examined the differing language abilities among impoverished siblings in a rural elementary school. This qualitative research was conducted through the use of a case study. Data were gathered through interviews and observational field notes. The findings indicated themes related to The Leader and The Follower, and implications were shared for both parents and educators for supporting language acquisition for siblings who fall under these two themes. Directions for future research were also included in this study.

References

- Amplify Education. (2024). Core knowledge foundation. *DIBELS*.
- Atici, V. O., Saray, F. A., & Özler, E. (2024). Investigation of children's communication skills based on mothers' opinions. *Shanlax International Journal of Education*, 12(S1), 41–50.
<https://doi.org/10.34293/education.v12iS1>
- Backer-Grøndahl, A., & Nærde, A. (2016). Self-regulation in early childhood: The role of siblings, center care and socioeconomic status. *Social Development*, 26(3), 530-544.
<https://doi.org/10.1111/sode.12216>
- Baker, E. R., Huang, R., Liu, Q., & Battista, C. (2020). Children's poverty exposure and hot and cool executive functions: Differential impacts of parental financial strain. *Journal of Cognition and Development*, 22(1), 1-21.
<https://doi.org/10.1080/15248372.2020.1853125>
- Booth, A. L., & Kee, H. J. (2008). Birth order matters: the effect of family size and birth order on educational attainment. *Journal of Population Economics*, 22, 367-397. <https://doi.org/10.1007/s00148-007-0181-4>
- Bornstein, M. H., & Lamb, M. E. (2011). *Cognitive development: An advanced textbook*. Routledge.
- Bredtmann, J., & Smith, N. (2018). Inequalities in educational outcomes: How important is the family? *Oxford Bulletin of Economics and Statistics*, 80(6), 1117-1144. <https://doi.org/10.1111/obes.12258>
- Cao, X., Jiang, M., & Ran, G. (2020). Parental self-efficacy and comforting behaviour of the firstborn children in different situations: The mediating role of sibling relationships. *Early Child Development and Care*, 192(4), 580-592. <https://doi.org/10.1080/03004430.2020.1779249>

- Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). Pearson.
- Department of Health and Human Services. (2024). *US federal poverty guidelines used to determine financial eligibility for certain programs*. <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>
- Ewing, J., Austin, S. F., Gresham, G. J., & Dickey, B. (2019). Pre-service teachers learning to engage all students, including english language learners, in productive struggle. <https://files.eric.ed.gov/fulltext/EJ1206251.pdf>
- French, R., Sariaslan, A., Larsson, H., Kneale, D., & Leckie, G. (2022). Estimating the importance of families in modeling educational achievement using linked Swedish administrative data. *Journal of Research on Educational Effectiveness*, 16(1), 106-133. <https://doi.org/10.1080/19345747.2022.2054480>
- Gurgand, L., Lamarque, L., Havron, N., Bernard, J. Y., Ramus, F., & Peyre, H. (2022). The influence of sibship composition on language development at 2 years of age in the ELFE birth cohort study. *Developmental Science*, 26(4). <https://doi.org/10.1111/desc.13356>
- U.S. News Education. (n.d.). *Harnett County Schools*. <https://www.usnews.com/education/k12/north-carolina/districts/harnett-county-schools-102431>
- Hindle, D. (2020). Hansel and Gretel: A complex tale of parent-child interactions. *Infant Observation*, 23(1-2), 84-98. <https://doi.org/10.1080/13698036.2020.1789488>
- Hindman, A.H., Wasik, B.A., & Anderson, K. (2022). Using turn and talk to develop language: Observations in early classrooms. *Read Teach*, 76(1), 6-13. <https://doi.org/10.1002/trtr.2113>

- Huang, R., Baker, E. R., Battista, C., & Liu, Q. (2022). Executive function and theory of mind in children living in poverty: A short-term longitudinal study. *Journal of Cognition and Development* 23(5), 751-775. <https://doi.org/10.1080/15248372.2022.2110873>
- Krejčová, K., Chýlová, H., & Michálek, P. (2019). A role of siblings in perception of academic self-efficacy and social support. *Journal on Efficiency and Responsibility in Education Science*, 12(4). <https://doi.org/10.7160/eriesj.2019.120403>
- Kwak, S. K. (2023). Learner initiative through multimodal communication resources in the english classroom. *English Teaching*, 78(3), 25. <https://doi.org/10.15858/engtea.78.3.202309.25>
- Perrigo, J. L., Hurlburt, M., Harris, T., Villamil Grest, C., Borja, J., & Samek, A. (2022). A qualitative methods approach to reimagine education-related parental involvement among low–socioeconomic status families. *Children and Schools*, 44(4), 224-235. <https://doi.org/10.1093/cs/cdac020>
- Sarama, J., Clements, D. H., Baroody, A. J., Kutaka, T. S., Chernyavskiy, P., Shi, J., & Cong, M. (2021). Testing a theoretical assumption of a learning-trajectories approach in teaching length measurement to kindergartners. *SAGE Publications*. <https://doi.org/10.1177/23328584211026657>
- Şengönül, T. (2021). The adverse role of poverty in the socialization processes in the family and in the cognitive development of children and school performance. *Pegem Journal of Education and Instruction*, 11(2), 1-13. <https://files.eric.ed.gov/fulltext/EJ1301984.pdf>
- Simpson, D., Loughran, S., Lumsden, E., Mazzocco, P., Clark, R. M., & Winterbottom, C. (2017). ‘Seen but not heard’. Practitioners work with poverty and the organising out of disadvantaged children’s voices and participation in the early years. *European Early*

- Childhood Education Research Journal*, 25(2), 177-
188. <https://doi.org/10.1080/1350293x.2017.1288014>
- Truth in American Education. (2024). *What is ELA in school? A comprehensive guide*.
<https://truthinamericaneducation.com/what-is-ela-in-school/>
- Uzun Çiçek, A., Akdag, E., & Celebi Erdivanli, O. (2020). Sociodemographic characteristics associated with speech and language delay and disorders. *The Journal of Nervous and Mental Disease*, 208(2), 143-146. <https://doi.org/10.1097/nmd.0000000000001120>
- Whitman, G., & Kelleher, I. (2016). *Neuroteach*. Rowman & Littlefield Publishing Group.
- Xiao, E., Qin, H., Zhu, X., & Jin, J. (2023). The influence of birth order and sibling age gap on children's sharing decision. *Early Childhood Development and Care*, 193(7), 939-951. <https://doi.org/10.1080/03004430.2023.2178429>
- Yin, R. K. (2014). *Case study research designs and methods* (5 ed.). Sage.
- Zang, E., Tan, P. L., & Cook, P. J. (2023). Sibling spillovers: Having an academically successful older sibling may be more important for children in disadvantaged families. *American Journal of Sociology*, 128(5). <https://doi.org/10.1086/724723>

Appendix A: Principal Consent Form



Department of Elementary Education and Middle Grades Education

231 Speight Building | Mail Stop 504 | East Carolina University | Greenville, NC 27858-4353
252-328-6833 office | 252-328-2585 fax | www.coe.ecu.edu

November, 2nd 2024

Jameesa Walker is working on her Masters of Arts in Elementary Education at East Carolina University. She just completed ELEM 6005 Educational Research in the Classroom 1, a required course where students plan individual action research projects to be completed and presented in another course later in their program. As part of a course assignment, Jameesa Walker has developed an action research project to be conducted over a 4-8 week period at Benhaven elementary school. This project must be submitted and approved by ECU's Institutional Review Board (IRB) before it can be implemented. Jameesa Walker is required to obtain your permission to conduct the project at Benhaven elementary school. She is required to provide the IRB with a copy of your permission before the IRB will review and/or approve the project.

Please review the attached action research project and sign the bottom of this form if completing this action research project titled, Language Acquisition meets with your approval.

Sincerely,

A handwritten signature in black ink, appearing to read "Kristen H. Gregory".

Kristen H. Gregory, Ph.D.

Dept. of Elementary and Middle Grades Education
College of Education, East Carolina University
gregorykr18@ecu.edu

Principal's Signature and Date:

I have received and reviewed a copy of Jameesa Walker's proposed action research project and give permission for her to conduct this action research project at Benhaven elementary school.

A horizontal line for a signature, with a black oval redaction mark placed over the signature area.
Signature

11-19-24
Date

Appendix B: County Approval

January 3, 2025

Ms. Jameesa Walker

Dear Ms. Walker,

After reviewing the proposed study, "Language Acquisition," conditional permission is granted to Jameesa Walker to interview a teacher, a parent, and two students (siblings) and complete observations on the students at

Ms. Walker must first obtain written consent from all parties involved, including parental permission for the two students. The consent form should clearly state the purpose of the research and specify that this is an independent project, not affiliated with K. After receiving copies of the signed consent forms, permission will be granted. No interviews and/or observations shall take place until final approval is granted.

Individual staff, parent, and student names, [redacted]ols, or the names of the schools within [redacted] County Schools **will not** be used in any publication or presentation. Participation is strictly **voluntary**, and participants must give written consent.

Project dates (for participation) are January 8, 2025, to December 30, 2025. We reserve the right to withdraw from the study at any time if our circumstances change. The data collected will remain entirely anonymous and confidential and may not be provided to anyone outside the research team.

If you have any questions or concerns, please feel free to contact me by phone at [redacted] or email me at blerguson1@harnett.k12.nc.us.

Sincerely,

[redacted]

Appendix C: IRB Approval



EAST CAROLINA UNIVERSITY

University & Medical Center Institutional Review Board

Willis Building · Mail Stop 682

600 Moye Boulevard · Greenville, NC 27834

Office 252-744-2914 · Fax 252-744-2284 · rede.ecu.edu/umcirb/

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB
To: Jameesa Walker
CC: Kristen Gregory
Date: 1/13/2025
Re: UMCIRB 24-002241

Walker: Language Acquisition among Siblings

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) occurred on

1/13/2025. The research study is eligible for review under expedited category #
5, 6, 7. The Chairperson (or designee) deemed this study no more than minimal risk.

As the Principal Investigator you are explicitly responsible for the conduct of all aspects of this study and must adhere to all reporting requirements for the study. Your responsibilities include but are not limited to:

1. Ensuring changes to the approved research (including the UMCIRB approved consent document) are initiated only after UMCIRB review and approval except when necessary to eliminate an apparent immediate hazard to the participant. All changes (e.g. a change in procedure, number of participants, personnel, study locations, new recruitment materials, study instruments, etc.) must be prospectively reviewed and approved by the UMCIRB before they are implemented;
2. Where informed consent has not been waived by the UMCIRB, ensuring that only valid versions of the UMCIRB approved, date-stamped informed consent document(s) are used for obtaining informed consent (consent documents with the IRB approval date stamp are found under the Documents tab in the ePIRATE study workspace);
3. Promptly reporting to the UMCIRB all unanticipated problems involving risks to participants and others;
4. Submission of a final report application to the UMCIRB prior to the expected end date provided in the IRB application in order to document human research activity has ended and to provide a timepoint in which to base document retention; and
5. Submission of an amendment to extend the expected end date if the study is not expected to be completed by that date. The amendment should be submitted 30 days prior to the UMCIRB approved expected end date or as soon as the Investigator is aware that the study will not be completed by that date.

The approval includes the following items:

Name	Description
Consent paragraph	Consent Forms
Interview protocol - initial teacher	Interview/Focus Group Scripts/Questions
Interview protocol - parent	Interview/Focus Group Scripts/Questions
Interview protocol - post teacher	Interview/Focus Group Scripts/Questions
Interview protocol - student	Interview/Focus Group Scripts/Questions
parent consent form	Consent Forms
Research proposal	Study Protocol or Grant Application
student assent form	Consent Forms

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

Appendix D: First Grade Teacher Approval



Department of Elementary Education
and Middle Grades Education

231 Spright Building | Mail Stop 504 | East Carolina University | Greenville, NC 27858-4353
252-328-6833 office | 252-328-2585 fax | www.ecu.edu

November 2nd 2024

Jameesa Walker is working on her Masters of Arts in Elementary Education at East Carolina University. She just completed ELEM 6005 Educational Research in the Classroom I, a required course where students plan individual action research projects to be completed and presented in another course later in their program. As part of a course assignment, Jameesa Walker has developed an action research project to be conducted over a 4-8 week period at Benhaven elementary school. She is asking if you would be willing to allow your classroom to participate in her study. This project must be submitted and approved by ECU's Institutional Review Board (IRB) before it can be implemented; your permission to allow your classroom to be a part of this project is a requirement of the IRB review process. Jameesa Walker is required to provide the IRB with a copy of your permission before the IRB will review and/or approve the project.

Please review the attached action research project and sign the bottom of this form if the inclusion of your classroom in this action research project titled, Language Acquisition meets with your approval.

Sincerely,

Kristen H. Gregory, Ph.D.
Dept. of Elementary and Middle Grades Education
College of Education, East Carolina University
gregorykr18@ecu.edu

Teacher's Signature and Date:

I have received and reviewed a copy of Jameesa Walker's proposed action research project and I give my permission for her to include my classroom in her action research project at [redacted] school.

Signature

Date

11/19/24

Appendix E: Second Grade Teacher Approval



Department of Elementary Education
and Middle Grades Education
231 Speight Building | Mail Stop 504 | East Carolina University | Greenville, NC 27858-4353
252-328-6833 office | 252-328-2585 fax | www.coe.ecu.edu



November 2nd 2024



Jameesa Walker is working on her Masters of Arts in Elementary Education at East Carolina University. She just completed ELEM 6005 Educational Research in the Classroom I, a required course where students plan individual action research projects to be completed and presented in another course later in their program. As part of a course assignment, Jameesa Walker has developed an action research project to be conducted over a 4-8 week period at Benhaven elementary school. She is asking if you would be willing to allow your classroom to participate in her study. This project must be submitted and approved by ECU's Institutional Review Board (IRB) before it can be implemented; your permission to allow your classroom to be a part of this project is a requirement of the IRB review process. Jameesa Walker is required to provide the IRB with a copy of your permission before the IRB will review and/or approve the project.

Please review the **attached** action research project and sign the bottom of this form if the inclusion of your classroom in this action research project titled, Language Acquisition meets with your approval.

Sincerely,

Kristen H. Gregory, Ph.D.
Dept. of Elementary and Middle Grades Education
College of Education, East Carolina University
gregorykr18@ecu.edu

Teacher's Signature and Date:

I have received and reviewed a copy of Jameesa Walker's proposed action research project and I give my permission for her to include my classroom in her action research project at

Signature

11/19/24

Date

Appendix F: Teacher Consent

You are being invited to participate in a **research** study titled Language Acquisition among siblings being conducted by Jameesa Walker, a student at East Carolina University in the elementary and middle grades education department. The goal is to survey six individuals in/at [REDACTED] school. The survey will take approximately 15 minutes to complete. It is hoped that this information will assist us to better understand the relationship between having siblings and language acquisition. There will also be a series of interviews that will be recorded to gain more information about the relationships of the siblings. All responses will be kept confidential and no data will be released or used with your identification attached. Your participation in the research is **voluntary**. You may choose not to answer any or all questions, and you may stop at any time. We **will not** be able to pay you for the time you volunteer while being in this study. There is **no penalty for not taking part** in this research study. Please call Jameesa Walker at [REDACTED] for any research related questions or the University & Medical Center Institutional Review Board (UMCIRB) at 252-744-2914 for questions about your rights as a research participant.

Appendix G: Parent Consent for Child



Department of Elementary Education and Middle Grades Education

231 Sprague Building | Mail Stop 504 | East Carolina University | Greenville, NC 27858-4351
252-328-6833 office | 252-328-2585 fax | www.ecu.edu

Dear Parent/Guardian,

I am presently working on my Masters of Arts in Elementary Education at East Carolina University. As part of my degree requirements, I am planning an educational research project to take place in my classroom that will help me to learn more about language acquisition among siblings. The fundamental goal of this research study is to better understand how sibling relationships affect the way they learn and acquire language skills.

As part of this research project in my classroom, your child will participate in various comprehension and verbal communication activities over the next six to eight weeks that will allow me to track their English language arts skills. This will include regular English Language Art instruction, lessons, and activities planned by their classroom teacher. This data will be collected through observations and a copy of their mClass vocabulary assessment. The students will also be asked to participate in a brief interview in which their responses will be recorded for data purposes. As this study is for educational research purposes only, the results of your child's participation **will not** affect your child's grade.

I am requesting permission from you to use your child's data in my research study. Please know that participation is entirely voluntary.

If you have any questions or concerns, please feel free to contact me at school at (919) 499-4811 or by emailing me at [redacted]@ecu.edu. If you have questions about your child's rights as someone taking part in research, you may call the University and Medical Center Institutional Review Board (UMCIRB) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director for Human Research Protections, at 252-744-2914.

If you permit your child's data to be used in my study, please return the attached form by January 15th 2025. Thank you for your interest in my educational research study.

Your Partner in Education,

Jameesa Walker

As the parent or guardian of [redacted]
(Write your student's name)

- ☒ I grant my permission for Ms. Walker to use my child's data in her educational research project regarding language acquisition. I fully understand that my child's data will be kept completely confidential and will be used only for the purposes of Ms. Walker's research study. I also understand that I or my child may at any time decide to withdraw my/our permission and that my child's grade will not be affected by withdrawing from the study.
- ☐ I do NOT grant my permission for Ms. Walker to use my child's data in her educational research project regarding language acquisition.

Signature of Parent/Guardian: [redacted]

Date 1-14-25

Appendix H: Parent Consent for Child



Department of Elementary Education and Middle Grades Education

231 Sprague Building | Mail Stop 504 | East Carolina University | Greenville, NC 27858-4353
252-928-6893 office | 252-928-2585 fax | www.ecu.edu

Dear Parent/Guardian,

I am presently working on my Masters of Arts in Elementary Education at East Carolina University. As part of my degree requirements, I am planning an educational research project to take place in my classroom that will help me to learn more about language acquisition among siblings. The fundamental goal of this research study is to better understand how sibling relationships affect the way they learn and acquire language skills.

As part of this research project in my classroom, your child will participate in various comprehension and verbal communication activities over the next six to eight weeks that will allow me to track their English language arts skills. This will include regular English Language Art instruction, lessons, and activities planned by their classroom teacher. This data will be collected through observations and a copy of their mClass vocabulary assessment. The students will also be asked to participate in a brief interview in which their responses will be recorded for data purposes. As this study is for educational research purposes only, the results of your child's participation will not affect your child's grade.

I am requesting permission from you to use your child's data in my research study. Please know that participation is entirely voluntary.

If you have any questions or concerns, please feel free to contact me at school at (919) 499-4811 or by emailing me at [redacted]. If you have questions about your child's rights as someone taking part in research, you may call the University and Medical Center Institutional Review Board (UMCIRB) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director for Human Research Protections, at 252-744-2914.

If you permit your child's data to be used in my study, please return the attached form by January 15th 2025. Thank you for your interest in my educational research study.

Your Partner in Education,

Jameesa Walker

As the parent or guardian of [redacted]
(Write your student's name)

- ☒ I grant my permission for Ms. Walker to use my child's data in her educational research project regarding language acquisition. I fully understand that my child's data will be kept completely confidential and will be used only for the purposes of Ms. Walker's research study. I also understand that I or my child may at any time decide to withdraw my/our permission and that my child's grade will not be affected by withdrawing from the study.
- ☐ I do NOT grant my permission for Ms. Walker to use my child's data in her educational research project regarding language acquisition.

Signature of Parent/Guardian: [redacted] Date 1-14-25

Appendix I: Student Assent

Verbal Assent Script

In our class we will be working on exploring the way you learn words and communication skills. We will observe how you communicate with one another and how that helps you to build your language skills. I will also collect some of your work from your teacher so I can better understand your progress. Do you want to participate? If you have any questions or don't want to participate, please let me know.

Signature of person obtaining assent

Date _____

[illegible]

Appendix J: Parent Consent

You are being invited to participate in a **research** study titled Language Acquisition among siblings being conducted by Jameesa Walker, a student at East Carolina University in the elementary and middle grades education department. The goal is to survey six individuals in/at [REDACTED] school. The survey will take approximately 15 minutes to complete. It is hoped that this information will assist us to better understand the relationship between having siblings and language acquisition. There will also be a series of interviews that will be recorded to gain more information about the relationships of the siblings. All responses will be kept confidential and no data will be released or used with your identification attached. Your participation in the research is **voluntary**. You may choose not to answer any or all questions, and you may stop at any time. We **will not** be able to pay you for the time you volunteer while being in this study. There is **no penalty for not taking part** in this research study. Please call Jameesa Walker at ([REDACTED]) 0 for any research related questions or the University & Medical Center Institutional Review Board (UMCIRB) at 252-744-2914 for questions about your rights as a research participant.

Appendix K: Initial Teacher Interview

Project: Language Acquisition

Time of Interview:

Date:

Place:

Interviewer: Jameesa Walker

Interviewee:

Position of Interviewee: First Grade Teacher

This study is designed to better understand how the relationship between siblings may impact language development and acquisition. I will collect data from both children participating in this study, along with their teachers and parents. Once the interviews have been completed, I will remove all names from the documents in an effort to protect the participants identities. This interview will take roughly fifteen to twenty minutes to complete.

Questions:

1. What is the best time to observe the student having one-on-one interactions?
2. What is the best time to observe the student having small group interactions?
3. What is the best time to observe the student having whole group interactions?
4. After hearing the purpose of this study, in your educated opinion what will I discover about the student's language and communication skills?

Appendix L: Observational Field Notes for First Grade

Observational field notes – Student interactions during ELA

Setting: 1st grade classroom

Observer: Walker

Role of Observer: Observer of student conversations

Time:

Length of Observation: 15 minutes

Descriptive Observations:

Reflective Observations:

One-on-one interactions-
student to student/ student to teacher

One-on-one interactions-
student to student/ student to teacher

Whole group interactions

Whole group interactions

Small group interactions

Small group interactions

Appendix M: Observation Field Notes for Second Grade

Observational field notes – Student interactions during ELA

Setting: 2nd grade classroom

Observer: Walker

Role of Observer: Observer of student conversations

Time:

Length of Observation: 15 minutes

Descriptive Observations:

Reflective Observations:

One-on-one interactions-
student to student/ student to teacher

One-on-one interactions-
student to student/ student to teacher

Whole group interactions

Whole group interactions

Small group interactions

Small group interactions

Appendix N: Final Teacher Interview Protocol

Project: Language Acquisition

Time of Interview:

Date:

Place:

Interviewer: Jameesa Walker

Interviewee:

Position of Interviewee:

This study is designed to better understand how the relationship between siblings may impact language development and acquisition. I will collect data from both children participating in this study, along with their teachers and parents. Once the interviews have been completed, I will remove all names from the documents in an effort to protect the participants identities. This interview will take roughly fifteen to twenty minutes to complete.

Questions:

1. In your own words please describe the vocabulary development level of the student
 - a. Could you explain your response more?

2. How does the student interact with other children in the classroom?
 - a. Tell me more

3. How does the student interact with you and your teacher assistant?

4. What are some strengths and weakness in relation to language acquisition that you have seen from this student?
 - a. Could you provide any additional details?

5. How would you describe the social-emotional development of this student in comparison to other students their age?
 - a. Could you provide any additional details?

Appendix O: Student Interview Protocol

Project: Language Acquisition

Time of Interview:

Date:

Place:

Interviewer: Jameesa Walker

Interviewee:

Position of Interviewee:

This study is designed to better understand how the relationship between siblings may impact language development and acquisition. I will collect data from both children participating in this study, along with their teachers and parents. Once the interviews have been completed, I will remove all names from the documents in an effort to protect the participants identities. This interview will take roughly fifteen to twenty minutes to complete.

Questions:

1. How do you feel about your relationship with your sibling?
 - a. Could you tell me more?

2. Who do you talk to the most when you are at home?
 - a. Why is that?

3. What do you talk about with your sibling?

4. Who takes care of you at home?
 - a. Can you tell me more about that?

5. Does your sibling help you learn?
 - a. Can you tell me more about that?

Appendix P: Parent Interview Protocol

Project: Language Acquisition

Time of Interview:

Date:

Place:

Interviewer: Jameesa Walker

Interviewee:

Position of Interviewee:

This study is designed to better understand how the relationship between siblings may impact language development and acquisition. I will collect data from both children participating in this study, along with their teachers and parents. Once the interviews have been completed, I will remove all names from the documents in an effort to protect the participants identities. This interview will take roughly fifteen to twenty minutes to complete.

Questions:

1. In your own words please describe the communication between your children while in the home.
 - a. Could you explain your response more?

2. How are the siblings' interactions different from how they interact with you?
 - a. Tell me more

3. Tell me about the type of language used in the home?

4. Who do the siblings interact with most in the home?
 - a. Could you provide any additional details?

5. How would you describe the relationship between the siblings?
 - a. Could you provide any additional details?