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Walden University
2020

Abstract

Preschool Educators' Instructional Practices of Bidirectional Literacy With Early

Hebrew-English Learners

by

Leah Donn

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

August 2020

Abstract

Effective implementation of early biliteracy instruction for heritage language learners is increasingly necessary in United States schools because of cultural diversity. Little is known about the optimal sequence of literacy instruction to emergent learners of English, along with Hebrew as a foreign language. The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. Sweller's cognitive load theory guided this study. The research questions addressed perceptions concerning instructional strategies of preschool educators who teach early literacy to Hebrew-English learners. Data were collected using semistructured interviews from a purposeful sampling of 12 preschool teachers and 9 preschool coordinators each with a minimum of 5 years of Hebrew day school experience. Content analysis using open and pattern coding was used to analyze the data related to the conceptual framework. The results of this study indicated that Hebrew day school administrators determine the sequence of biliteracy instruction based on cultural philosophy and external factors. Instructional practices, staffing, and environment were perceived to influence biliteracy acquisition. Sequential biliteracy instruction was perceived more favorably than simultaneous instruction, which requires strong, focused support to be effective. It is recommended that school administrators of Hebrew day schools be presented with these results. These findings suggest that school administrators have the potential to create positive social change by improving curriculum design and biliteracy acquisition for heritage language learners.

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Dedication

In honor of my parents who inspired me, and my husband and children who stood beside me. May the improved Hebrew-English biliteracy curriculum design that results from this study be a merit for all.

Acknowledgements

With sincere appreciation to Dr. Billie Andersson and Dr. Kathryn Swetnam for their expertise, encouragement, and belief in me and my study. I was blessed with a committee that went beyond the call of duty to help me meet my goals and achieve my dream.

You have changed my life and the lives of the children who will ultimately benefit from your dedication. Thank you.

Table of Contents

List of Tables

Chapter 1: Introduction to the Study

The importance of early childhood education is globally recognized. The quality of that education sets the foundation for lifelong learning (Sims & Waniganayake, 2015). Effective implementation of early biliteracy instruction for heritage language learners is gradually more necessary because of the increasing number of heritage language learners enrolled in schools in the United States (Son, 2017). Heritage language learners are members of a community whose linguistic roots and needs are different from those of English language learners because of family background or cultural connection (Carreira, 2004). Systematic biliteracy instruction is therefore important because it may influence reading ability in both English and the heritage language (Kremin, Arredondo, Shih-Ju Hsu, Satterfield, & Kovelman, 2019).

Preschool students in Hebrew day schools are introduced to Hebrew, their heritage language, as well as to the orthographically deep English alphabetic code, and teachers are challenged to provide effective instruction of these bidirectional orthographies (Berens, Kovelman, & Petitto, 2013). Best literacy practices for biliteracy instruction are specific to the languages being introduced (Asadi, Khateb, Ibrahim, & Taha, 2017), and there is limited research on Hebrew-English literacy instruction. The issue of bidirectional Hebrew-English emergent literacy instruction has not been well studied, with research on mono-directional orthographies dominating the biliteracy literature (Maciel et al., 2018).

The value of exploring teachers' perspectives of effective literacy instruction is well documented in the literature. Teachers' perceptions influence job satisfaction,

performance, and orientation for change (Balkar, 2015). Curricular reform of early literacy instruction has been linked to data collected via interviews, observations, and teachers' reflections (Mihai, Butera, & Friesen, 2017) which have emphasized the need for examining preschool teachers' perceptions. Dual language emergent literacy instruction must be based on evidence-based instructional methodology so that classroom teachers utilize effective sequence of instruction in the curriculum (Chan & Sylva, 2015).

This study may contribute to positive social change by exploring effective practices in bilingual education. Successful second language education promotes academic development, socialization, and economic opportunities (Lyseng, Butlin, & Nedashkivska, 2014). Well-designed instruction may allow for enhanced decoding in both languages as it strengthens teachers' strategies and students' reading ability. In Chapter 1, I provided the background literature, problem statement, purpose statement, and research questions for this proposed study. I also present the conceptual framework that this study is based on, describe the nature of the study, and offer definitions specific to this study. Finally, I present assumptions, scope and delimitations, limitations, significance, and a summary of the dissertation.

Background

Early literacy instruction has been linked to successful reading in elementary school. Ouellette and Sénéchal (2017) studied the positive influence of effective early literacy instruction on reading outcomes in older grades. Stahl (2015) took research into practice and discussed the nuances of evidence-based methodology that promotes skillful teaching of the alphabet to emergent learners, a predictor of positive reading outcomes.

The author concluded that school-based systematic practice in (a) isolation, (b) letter-sound correspondence based on letter characteristics and a developmentally appropriate sequence, (c) simultaneous phonological awareness activities, (d) authentic reading, and (e) shared writing are effective methods of teaching the alphabet to young children. Effective early biliteracy instruction is equally relevant as the diversity in American schools continues to increase (King & Butler, 2015). Research on foundational reading skills, on which reading outcomes are built, must thus be applied to dual alphabet instruction, because it is apparent that early literacy skills in kindergarten are positively correlated to literacy ability in first grade and beyond (Ouellette & Sénéchal, 2017).

Multiple factors affect biliteracy instruction. Lallier and Carreiras (2018) posited that not all language combinations present the same challenges and that instruction must be tailored to the specific orthographies being taught. Variations in script, distance in exposure to the two languages, and developmental stage all influence biliteracy acquisition. Early biliteracy learners of shallow-shallow orthographies, such as Spanish-Italian have been shown to transfer the concept of consistent letter-sound relationships (Antzaka et al., 2018) more readily than those students exposed to shallow-deep orthographies, such as Hebrew-English. Prior exposure to both languages, as is often the case in heritage language learners (Wiley, 2001), is also a factor in biliteracy acquisition, with children exposed to both languages being more likely to successfully learn to read both orthographic codes (Chan & Sylva, 2015).

This study was needed to address the gap in knowledge about practice and educators' perceptions of effective methodology regarding the optimal sequence of

literacy instruction to early Hebrew-English literacy learners. I explored educators'
perceptions of effective Hebrew-English instruction for the purpose of creating an
effective early biliteracy curriculum for heritage language learners because no consistent
curriculum currently exists. Effective second language education has the potential to
enhance academic success and career options (Lyseng et al., 2014) and thus must be
properly presented.

Problem Statement

Hebrew day schools in a northeastern state expose English-speaking preschool
learners to two distinct bidirectional alphabetic codes when teaching Hebrew and English
reading skills. The initial stage of literacy acquisition, when alphabetic codes are
unknown, contributes most strongly to reading development (Tortorelli, Bowles, &
Skibbe, 2017). The problem investigated in this study was that little is known about using
simultaneous or sequential instructional strategies when teaching the orthographically
regular Hebrew alphabet while teaching the English code of reading to English-speaking
early literacy learners in Hebrew day schools.

Each alphabetic code requires language-specific cognitive reading skills (Probert
& de Vos, 2016), and knowledge of best instructional practices for biliteracy remains
limited (Farran, Bingham, & Matthews, 2016). Because the cognitive variables related to
biliteracy vary depending on the languages (Asadi et al., 2017), it is important to
determine from the perspective of preschool educators whether simultaneous or
sequential instruction of Hebrew-English bidirectional alphabetic codes is most effective.
Preschool educators' perceptions of the delivery of literacy instruction has the potential to

influence curriculum (Mady, 2016) and has not been widely explored (Pyle, Poliszczuk, & Danniels, 2018).

There is a gap in the research about practice, in a northeastern state densely populated by Jewish residents, regarding the optimal sequence of literacy instruction to emergent learners of English and Hebrew as a foreign language (Klein, 2018). Ahmadi and Mohammadi (2019) stated that the optimal sequence of instruction when teaching a foreign language is crucial to the long-term success of that instruction. There is increasing evidence that visual attention skills affect reading outcomes (Onochie-Quintanilla, Defior, & Simpson, 2017), so that two different orthographies, decoded in two directions, tax the brain structures responsible for visual processing (Saksida et al., 2016). Furthermore, deep orthographies (i.e., writing systems where there is not a one-to-one correspondence between sound and symbol), such as English, require greater effort to learn (Schmalz, Marinus, Coltheart, & Castles, 2015). The visual stress involved in learning bidirectional alphabetic codes requires more time and effort than learning to read a single shallow orthography (Lallier & Carreiras, 2018). Therefore, I researched whether educators perceive simultaneous or sequential teaching of bidirectional codes as the most supportive for student success to be used with early readers of Hebrew and English orthographies.

Purpose of the Study

The purpose of this qualitative case study was to investigate preschool educators' perceptions concerning simultaneous or sequential instruction strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent

literacy learners in Hebrew day schools. Students in early childhood classrooms struggle to learn both Hebrew and English alphabetic codes at a young age, which results in poor reading outcomes in first grade and beyond (Klein, 2018). There is a need for an increased understanding of educators' perceptions of the most effective model of instruction for bidirectional Hebrew-English literacy instruction because emergent literacy instruction is the foundation for future reading ability (Terrell & Watson, 2018). An increased understanding of the most effective instructional strategies for dual language learners may allow early childhood educators to include effective sequence of instruction in their biliteracy reading curriculum.

Research Questions

The research questions for this study were as follows:

RQ1: How do preschool educators perceive simultaneous instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ2: How do preschool educators perceive sequential instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ 3: How do preschool educators perceive the effectiveness of teachers' simultaneous instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

RQ4: How do preschool educators perceive the effectiveness of teachers'

sequential instructional strategies when teaching dual bidirectional alphabetic

codes of English and Hebrew to English-speaking early literacy learners in

Hebrew day schools?

Conceptual Framework

Chandler and Sweller (1991) are associated with the cognitive load theory (CLT)

developed in the 1980s and expanded in the 1990s. CLT is an important conceptual

framework that provides an understanding of cognitive processes used to inform

instructional design. Effective cognitive load depends on the manner in which

information is presented to the learner and is determined by the instructional design

(Paas, Renkl, & Sweller, 2003).

Sweller (1988) focused on determining which cognitive factors govern the

difficulty inherent in learning new material. CLT deals with learning that is artificial,

meaning that manipulating instructional design influences the cognitive load (Sweller,

1994; Sweller, van Merriënboer, & Paas, 1998).). Thus, controlling the interaction

between the two alphabetic codes will determine the level of difficulty. Intrinsic

cognitive load, on the other hand, refers to material that is inherently difficult. If elements

can be learned sequentially because they do not interact, intrinsic cognitive load will be

low (Sweller, 2010).

This conceptual framework served to develop the research questions, which were

designed to investigate teachers' perceptions of effective literacy practices when teaching

bidirectional Hebrew-English orthographies to early readers and grounded the data

collection process. The CLT states that the cognitive load of young readers has a direct influence on their ability to decode (Peng et al., 2018). English-speaking early literacy learners are exposed to both Hebrew and the deep, irregular orthography of the English language, thus creating a cognitively challenging course load (Nam, 2018). In this study, I sought to add to this research by investigating preschool educators' perceptions of teaching the orthographically regular Hebrew alphabet alongside the English code to explore whether simultaneous teaching of bidirectional codes is an extraneous load for English-speaking early literacy learners in Hebrew day schools or whether there is interactivity between the two alphabetic codes that would allow for effective simultaneous instruction.

To analyze the data, I used open coding of the data from the transcribed interviews. Open coding, also referred to as initial coding, helps to categorize qualitative data into distinct elements, permits comparison of similarities and differences, and assists with the analysis of the findings (Saldaña, 2016). During a second stage of analysis, I used pattern coding to find relationships among the previously generated codes, determine categories, and present emerging themes extrapolated from the data for the purpose of answering the research questions upon which the study is predicated.

Nature of the Study

In this doctoral study, I used an exploratory, qualitative case study design to understand something that has not been well researched (see Ravitch & Carl, 2016). An exploratory qualitative case study design addresses the purpose of the study to investigate preschool educators' perceptions concerning simultaneous or sequential instruction

strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools. In addition, a qualitative exploratory case study allows a researcher to examine data related to real-life phenomena using a small number of participants as subjects (Yin, 2016).

I used purposeful sampling to include participants who teach in Hebrew day schools in a densely populated northeastern city in the United States. Teachers and preschool coordinators from these schools were invited to participate. I invited 12 teachers to participate: three volunteer participants who teach in Hebrew day schools that enroll male students, four volunteer participants from Hebrew day schools that enroll female students, and five volunteer participants from Hebrew day schools that enroll students of both genders. I also included nine preschool coordinators from single gender and mixed gender schools to be participants in this study. Participants' rights were addressed and protected by obtaining consent letters and assuring confidentiality.

I collected data from semistructured interviews (45-60 minutes in length) with 12 preschool, general education teachers and nine preschool coordinators via telephone conferences. I created the protocol and interview questions based on the conceptual framework and allowed the participants to express their perceptions of Hebrew-English biliteracy acquisition. I used bracketing to prevent potential bias, in addition to recording the interviews of the preschool teachers and coordinators. I used member checking of the findings of the analysis to control bias and further increase reliability. The interviews of teachers and coordinators triangulated the data collected (see Patton, 1999) and added

credibility to the findings (see Chen, 2015). The raw data is being kept in a secure storage area for 5 years after the conclusion of the study.

Definitions

Definitions specific to this study are as follows:

Aleph-Bais/Aleph-Bet: The letters of the Hebrew alphabet.

Alphabetic code: The alphabetic code is the reversible correlation between the distinct sounds detected in spoken language and the letters or letter patterns that represent those sounds (Gunning, 2017).

Bidirectional alphabetic orthographies: Bidirectional orthographies refer to alphabets that are read and written in two opposite directions. English is read and written from left-to-right; Hebrew is read and written from right-to-left (Hussein, 2014).

Early reading: Early reading refers to literacy learning in kindergarten and first grade. This stage revolves around the acquisition of the alphabetic principle as students begin to use letter-sound relationships to decode, write, and recognize print (Gunning, 2017). In Hebrew day schools, the Hebrew and English alphabets are often introduced as early as prekindergarten (Klein, 2018).

Hebrew day school: A Hebrew day school refers to an educational institution that provides Jewish children with a Jewish education and a secular education in one setting (Klein, 2018) on a full-time, daily basis.

Orthography: Orthography refers to the combination of specific letter patterns that form words. Automatic recognition of these patterns leads to reading fluency as words are accessed automatically when reading text (Levin, 2011).

Teacher perceptions: Teacher perceptions are "implicit or explicit conceptions about school and learning-related matters that influence their perceptions of the environment and their behaviors" (Kunter et al., 2013, p. 807).

Visual attention span: Visual attention span refers to the number of components within a multi-element arrangement that can be processed at the same time (Bosse, Tainturier, & Valdois, 2007)

Assumptions

Because it is not possible to provide evidence that all claims made in this dissertation are true, certain assumptions were made when designing this study (see Yin, 2016). Assumptions in this study included the belief that the participant teachers were as experienced as they claimed to be. I also assumed that the teachers would be truthful and honest in their responses based on the fact that there would be no known conflict of interest present that would influence the responses of any participant. Finally, another assumption was that the participants in this study had the necessary knowledge and expertise to answer the research questions.

Scope and Delimitations

The scope of this study was limited to preschool biliteracy classrooms that teach Hebrew as a heritage language to English speaking children. Participants were limited to general education teachers with more than 5 years of experience in teaching Hebrew-English heritage language learners. Teachers who instruct in Grade 2 and above were not included because the issues related to introducing dual orthographies to early readers are found in preschool and first grade. Preschool in Hebrew day schools includes

prekindergarten, also called nursery, and comprises 4-year-old students. Kindergarten, comprising 5-year-old students, is also considered preschool and is referred to as pre-1-a in many schools (Klein, 2018). Preschool teachers were included because the primary focus of early childhood education is reading acquisition (Stark, Snow, Eadie, & Goldfeld, 2016) and quality emergent literacy instruction is recognized as pivotal to future academic success (Sims & Waniganayake, 2015).

The teachers who lent their perspectives to this study teach Orthodox Jewish preschool students between the ages of 4 and 6, which is the age when Hebrew is introduced in the community's private Hebrew day schools (Klein, 2018). The schools for this study were all located in a large metropolitan city on the East Coast. Teachers reported a minimum of 5 years of teaching experience to participate in this study. The participants had post-high school training in the fields of education, special education, and school psychology, however none of the participants had college degrees in literacy or reading. Participating teachers included those who instruct in single-gender schools, as well as teachers who work in mixed-gender educational settings. Additionally, schools that service Jewish children from European descent, as well as those who educate children from Middle Eastern origins, and those schools that are a composite of both groups, were included in the study. Cultural diversity within the Jewish community was further represented because the scope of this study ranged from ultra-Orthodox schools to modern-Orthodox schools. Although the number of classroom teachers who were interviewed is small in comparison to the number of teachers that exist in this city, every

effort was made to be inclusive of all types of Hebrew day schools to best represent the cultural diversity that exists within the community.

Qualitative research, by its very nature, has limited transferability. Because of the small number of participants and lack of statistical data, results of qualitative research may vary if replicated (Ravitch & Carl, 2016). However, every attempt was made to allow for generalization by including only qualified participants who teach in diverse preschool classrooms. Future research can build upon these findings and transfer this research to other settings across the United States and the globe so that early literacy learners are provided with effective literacy instruction when exposed to bidirectional orthographies.

Limitations

Limitations in this study were related to the design of the study, to the methods of sample selection, as well as to data collection and analysis (see Yin, 2016). Another limitation was that this study's conceptual framework centered around the CLT. If other frameworks, such as the situated learning theory (Lave & Wenger, 1990) would be utilized for this study, varied outcomes may result.

The teachers interviewed for this study were purposefully chosen and thus the study does not have the benefits of using random sampling (see Ravitch & Carl, 2016). Furthermore, generalizability of these findings is limited because of the number of participants and the fact that all teachers were chosen from one community in a northeastern city in the United States. Factors inherent in early reading proficiency, such as socioeconomic status of the parent body, family demographics, and parental

educational attainment were not included. Finally, the selection of teachers included those from mixed as well as gender-specific schools, without taking into account the differences that may be inherent in single gender educational settings.

Limits in methodology included using interviews as the primary mode of data collection. Self-reported data were subject to the possibility that educators answered questions keeping socially acceptable norms in mind. Thus, the information reported may not always have reflected the actual educator experience (see Khonamri & Salimi, 2010**)**.

Bias must be identified in any study and measures must be put into place to address this concern. As a literacy specialist and special educator who has worked with Hebrew heritage learners, my experience with elementary school and high school students may have shaped my view on early literacy instruction. I took measures to be cognizant of this possible bias and did not include teachers or coordinators with whom I worked in the past. Interview questions were also carefully constructed to be impartially and objectively written.

Significance

Exposure to different languages and cultures fosters acceptance that builds a well-balanced society. It is possible for individuals to belong to more than one culture while maintaining their cultural identity (Cummins, 2015). One way that this complex configuration is achieved is by being fully capable of participating in both cultures. People who maintain their heritage culture, including the ability to read, write, listen, and speak in both languages, are likely to be culturally well-adjusted and have increased self-confidence (Haim, 2018). The educational system must recognize the needs of culturally

mixed students and support the maintenance of their ethnic identity. Maintaining biculturalism has positive ramifications, not only on a personal level, but on a societal level, as well (Carlo, Basilio, & Knight, 2016; Lee, 2002)

Hebrew day school teachers seek to transmit Jewish laws and customs that have been passed on from generation to generation. Original texts that serve to foster this transmittal are written in Hebrew and thus students in early childhood classrooms are expected to learn both Hebrew and English bidirectional alphabetic codes at a young age, which often results in poor reading outcomes in first grade and beyond (Klein, 2018). There is significant benefit to addressing the effective design of bidirectional early literacy curriculum because early reading instruction significantly influences reading ability of elementary school students (Foorman, Herrera, Dombek, Schatschneider, & Petscher, 2017). There is a need for an increased understanding of educators' perceptions of the most effective model of instruction for bidirectional Hebrew-English literacy instruction because early literacy instruction is the foundation for future reading ability (Terrell & Watson, 2018).

Biliteracy instruction is increasingly relevant in the United States where the percentage of ethnically diverse and multicultural students continues to increase (King & Butler, 2015). Regardless of the similarity between the language pairs, positive crosslinguistic effects have been shown as knowledge of one language positively affects a second language (Berthele & Vanhove, 2017). The acquisition of second language literacy supports intellectual growth, socialization opportunities, and career choices (Lyseng et al., 2014). It is thus important to examine teachers' perspectives of the most

effective instructional biliteracy practice so that educators can take advantage of these constructive properties.

This study may contribute to positive social change by exploring effective practices when teaching Hebrew-English emergent readers, thereby improving educational opportunities for young learners of various heritage languages. One of the factors that has been evidenced to influence reading acquisition includes the quality of instruction (Hagan-Burke et al., 2013). An increased understanding of the most effective instructional strategies for dual language learners may allow for early childhood teachers to include effective sequence of instruction in their biliteracy reading curriculum. Well-designed instruction may lead to improved decoding in both languages as it strengthens teachers' strategies and students' reading ability. Exposing young children to a foreign language and culture has the potential to positively affect personality by opening the minds of emergent learners to diversity (Ben Maad, 2016).

Summary

Little is known about the optimal sequence of introducing the orthographically regular Hebrew alphabet to heritage language learners while teaching the English code of reading to English-speaking early literacy learners in Hebrew day schools. I presented the influence of early literacy instruction on later reading ability in the background section of this dissertation. Researchers observed that effective emergent literacy instruction is vital for establishing a solid literacy foundation (Terrell & Watson, 2018). Furthermore, in the background section I noted that different languages require individualized approaches

and I provided evidence that bidirectional Hebrew-English requires examination not currently explored in the literature.

Chapter 1 established that a qualitative case study is most effective to explore preschool educators' perspectives when teaching both Hebrew and English to early learners. Educators' perspectives on sequential versus simultaneous instruction of bidirectional orthographic codes may help narrow the gap in research about practice concerning the effective curricular design for heritage language learners. Definitions, assumptions, scope and delimitations, and limitations completed this chapter. Chapter 2 begins with the CLT that served as the conceptual framework to ground this dissertation. Chapter 2 also includes an in-depth review of the literature to clarify and expound upon the challenges faced by heritage language learners and their early literacy teachers.

Chapter 2: Literature Review

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. Reading is vital to children's success in academic, social, and economic arenas (Gunning, 2019). Brown (2014) stated that literacy develops over time and includes various skills necessary to master the complex task of reading. In recent years, English Language Common Core State Standards such as comprehension, expository, and critical thinking skills have been the focus of literacy studies (McLaughlin & DeVoogd, 2017). There has been a resurgence, however, in exploring the importance of quality early literacy instruction and its positive correlation with subsequent reading outcomes (Foorman et al., 2017). An essential component of academic success is the ability to read and write, which allows students to build knowledge (Mihai et al., 2017). Saracho (2017) noted the significant influence of direct early reading instruction on the reading ability of elementary school students.

With the increase of culturally diverse students enrolled in our schools (King & Butler, 2015), it is important to examine the effectiveness of instructional design when providing biliteracy instruction. Effective biliteracy instruction is important for children who speak English as a foreign language, as well as to heritage language learners who speak English as a first language and learn a language other than English for cultural reasons (Carreira, 2004). Son (2017) stated that heritage and nonheritage language

learners process language differently and thus the methods and implementation of literacy instruction must be tailored to the specific needs of diverse populations.

The problem investigated in this study was that little is known about using simultaneous or sequential instructional strategies when teaching the orthographically regular Hebrew alphabet and the English code of reading to English-speaking early literacy learners in Hebrew day schools. The literature reviewed in this chapter is focused on (a) the literature search strategies, (b) conceptual framework, (c) early literacy curriculum, (d) dual literacy instruction, (e) simultaneous versus sequential biliteracy instruction, (f) Hebrew-English language learners, (g) the importance of teachers' perceptions, and (h) the challenges inherent in teaching bidirectional orthographies to young students.

Literature Search Strategy

I conducted the literature review by researching professional journal articles, government sponsored studies, and textbooks. Through Walden Library databases I searched for peer-reviewed articles and dissertations from ERIC, SAGE Premier, Taylor and Francis Online, ResearchGate, Education Source, and ProQuest Dissertations and Theses Global. I also used Google Scholar as another source to obtain scholarly literature. The research largely consisted of studies conducted within the last 5 years from 2014–2019. Seminal works span research done in the 1980s and 1990s, with one original source dating back to 1956.

The research topics included the influence of early literacy learning on reading achievement, literacy curriculum, dual literacy learners, simultaneous versus sequential

instruction, heritage language learners, and educators' perceptions. Over 100 references reflect a saturation of literature related to educators' perceptions of teaching heritage learners' bidirectional literacy.

Conceptual Framework

A conceptual framework interprets the research questions in a qualitative study by focusing the research problem within the context of a previously researched theory (Yin, 2016). The CLT (Sweller, 1988) has as its foundation the processing of both working memory and long-term memory. It was thus an appropriate framework to be utilized when examining educators' perceptions of the benefits and challenges inherent in teaching bidirectional orthographies to heritage language learners.

Cognitive Load Theory and Instructional Design

The CLT, developed in the 1980s (Sweller, 1988) and expanded in the 1990s, (Sweller, 1994; Sweller et al., 1998) is a significant conceptual framework that can be used to offer insight into the cognitive processes used to structure instructional design. According to the CLT, effective cognitive load depends on the way information is presented to the learner and is determined by the instructional design (Paas et al., 2003). An understanding of the CLT will thus guide effective curriculum design for early readers of Hebrew and English orthographies.

Sweller (1988), the theorist most closely associated with the CLT, concentrated on determining which cognitive factors governed the difficulty inherent in learning new material. Drawing on Miller's (1956) seminal study, Sweller (1988) noted that the greatest limitation associated with working memory is its inability to process large

amounts of information simultaneously. Sweller (2010) further focused on determining which cognitive factors governed the difficulty inherent in learning new material. CLT deals with learning that is artificial, meaning that manipulating instructional design influences the cognitive load. Intrinsic cognitive load, on the other hand, refers to material that is inherently difficult to learn (Leppink, van Gog, Paas, & Sweller, 2015). Controlling the interaction between schemas determines the level of difficulty. If elements are learned sequentially because they do not interact, intrinsic cognitive load will be low (Sweller, van Merriënboer, & Paas, 2019). This study explored educators' perceptions of effective curriculum design of Hebrew and English early reading instruction by taking cognitive infrastructure and cognitive load into account.

Sensory memory. Research into the effectiveness and efficiency of curriculum design has been grounded in the mental processes necessary for learning and memory. Baddeley (1992) described the information processing system needed to store knowledge as comprising cognitive architecture divided into three modes of memory that work together: sensory, working, and long-term memory, each with its own distinctive features and limitations. Sensory memory works with incoming stimuli from the five senses, including visual and auditory stimuli that are foundational for reading (Adams, Nguyen, & Cowan, 2018). The defining limitation of sensory memory is its short duration, with visual information lasting for less than a second, and auditory information remaining for three seconds (Au et al., 2015). Early readers of two orthographies must therefore quickly identify letters extracted from two separate alphabetic codes in a very limited amount of

time in order to further process this information and use the alphabetic codes in order to read.

Working memory. From the sensory register, information is transferred to working memory, which is the part of the cognitive architecture related to consciousness (Au et al., 2015). Working memory enables thinking and is directly linked to processing information. As noted previously, working memory cannot process large amounts of information simultaneously, and when the capacity of working memory is exceeded, some, or all, of the information is lost (Adams et al., 2018). The fact that both sensory memory and working memory are time sensitive in their capacity must be kept in mind when designing instruction of new material. Alharbi (2016) suggested that extraneous cognitive load limits the ability of working memory. Design of instruction thus has a major influence on the ability of students to recall, retain, and integrate what they have learned. This load is created by the method and design of instruction, as well as the approach used to present new information. Heritage language learners presented with the bidirectional, orthographically deep English language, and the orthographically shallow Hebrew language are faced with a heavy cognitive load that requires investigation as to the most effective method of instruction.

Long-term memory. The goal of instruction is to place information into the third mode of memory known as long-term memory. Long-term memory contains permanently stored information that includes everything a person knows and knows how to do, such as information about personal identity; the letters of the alphabet; the multiplication tables; and the ability to type, swim, read, and knit; and long-term memory appears to be

unlimited (Sweller et al., 2019). CLT assumes that acquisition of knowledge in long-term memory is the goal of instruction (Kalyuga & Singh, 2016). Prior knowledge, and the interactivity born of this knowledge, is therefore integral to learning. The amount of information to be processed, as well as the sequence of instruction, all influence the cognitive ability to transfer information to long-term memory.

Learning refers to the effective storing, or encoding, of information into long-term memory so that the knowledge can be recalled and used upon demand. Within long-term memory, information is structured in networks and referred to as schemata, that connect to other networks. Well-learned schemata are easy to recall and apply automatically. Thus, the pivotal element of all skilled performance is the successful placement of information into long-term memory (Sweller et al., 2019). The means needed to encode information into long-term memory is vital for learning. In order to be stored in long-term memory, all information must first be processed by working memory. If working memory is not able to process the data, the information will not be efficiently stored in long-term memory for later use.

The Influence of Instructional Design on Cognitive Load

Three categories of cognitive load are examined as important parts of the conceptual theory that provides a framework for using the understanding of cognitive processes to inform instructional design. Intrinsic cognitive load focuses on interactivity between elements to be learned and is measured from low to high. Extraneous or ineffective cognitive load refers to a load that is unnecessary and impedes acquisition and automaticity of material. Germane or effective cognitive load depends on the way the

information is presented to the learner to create a schema and is determined by the

instructional design (Paas et al., 2003). Because CLT deals with learning that is artificial

and is not intrinsically difficult to learn, manipulating design influences cognitive load.

Controlling interaction between schemas has the potential to determine the level of

difficulty embedded in learning new material. Consequently, there are substantive

implications for designing curriculum through the perspective of CLT. According to

Castro-Alonso, Ayres, and Sweller (2019), for example, the standard practice of

presenting similar information simultaneously, referred to as the redundancy effect,

should be avoided. Another cognitive concept related to instructional design is the

depletion effect (Chen, Castro-Alonso, Paas, & Sweller, 2018). The authors explained the

depletion effect to mean that cognitive effort directed to one task, lessens the

performance on a subsequent, similar task as a result of reduced availability of working

memory. These are instances of different instructional procedures that can increase or

decrease the number of elements that working memory must process.

Cognitive Load and Literacy

The restrictions of working memory may obstruct the learning process required

for young students learning to read. Peng et al. (2018) explored the relationship between

reading and working memory and discovered a correlation between the cognitive load of

young readers and their ability to decode. Conversely, Swanson (2015) found that

achievement in reading a second language correlates directly with the development of

working memory. The interactivity between two languages is therefore pivotal to its

instructional design. This progression forms the foundation of the CLT (Sweller et al.,

2019) and should be studied so that educators may connect theory to instructional design of bidirectional orthographies.

The complexity of the English orthographic structure creates a cognitively challenging course load. Knight, Galletly, and Gargett (2017) researched cognitive load as it is related to literacy development in the English language and deemed the highly irregular orthography of the English language as a factor for the high cognitive load imposed on preschoolers learning the English alphabet. Simultaneous teaching of parallel regular orthographies has been explored and noted as a possible means by which Anglophone countries might expedite early literacy development with a germane cognitive load (Brannon, 2019). Because English is a complex language to learn to read, it is important to address the cognitive load of young children as these students are introduced to both English and a second language.

Specifically related to this study is the growing interest in heritage language learners among bilingual researchers. Moussa-Inaty, Atallah, and Causapin (2019) investigated the relationship between language of instruction and learning styles, performance, and cognitive load. Findings from this study confirmed that cognitive load was the single greatest predictor of student success. Applying the CLT to the study of early literacy acquisition of English-Hebrew heritage language learners will allow for research into effective methodology for teaching young children dual orthographies in a manner that does not overload their working memory (Polinsky & Scontras, 2019).

CLT supports the understanding of how young children, specifically heritage language learners, acquire early literacy skills that are the foundation for reading, and

significantly affect future literacy (Terrell & Watson, 2018). Guida et al. (2018) studied Arabic literates who read from right-to-left and noted that students' culture influenced serial order working memory, which is related to cognitive spatial attention. Literacy and directionality in reading were found to be culturally related. This further lends support to applying the CLT to this study to research an effective approach for teaching young heritage language learners' dual orthographies in a manner that does not overload their working memory.

Hebrew and English are read in opposite directions and utilize different alphabetic codes. Dissimilar orthographies in dual literacy acquisition must be considered when designing an effective biliteracy program for early readers (Schmalz et al., 2015). Early literacy learners exposed to both a shallow orthography, and the deep, irregular orthography of the English language carry a cognitively challenging course load (Nam, 2018). The CLT suggests that this extraneous cognitive load may inhibit the ability of working-memory which is necessary for the acquisition of literacy skills (National Early Literacy Panel, 2009). Using CLT is thus an effective lens through which to examine teachers' perceptions of biliteracy reading acquisition of young heritage language learners.

Cognitive Load Theory and Sequence of Instruction

Optimal learning occurs when instruction is based on the understanding of how cognitive processes operate. According to CLT, all new information enters through sensory memory, is processed through working-memory, and ultimately must be stored in long-term memory. Once stored as schemata in long-term memory, automaticity occurs.

The goal then is to present information effectively to build schemata, and not overload working-memory. Leppink et al., (2015) described five principles of cognition that influence instructional design: (a) the information store principle, (b) the borrowing and reorganizing principle, (c) the randomness as genesis principle, (d) the narrow limits of change principle, and (e) the environmental organizing and linking principle. The fifth principle assumes that learning is enhanced when there is a gradual development of knowledge transferred to long-term memory.

The assumption that learning is enhanced when there is a gradual development of new knowledge based on prior knowledge is based on the seminal research of Cooper and Sweller (1987). The findings from the study noted that working memory requires the integration of previously learned materials by comparing and contrasting new material to information stored in long-term memory. When learners are sufficiently expert in one aspect of the content area, and have a high-level schema in that area, the introduction of new information related to that content area is relatively easy to integrate (Gilboa & Marlatte, 2017). Thus, proficiency in an element that interactively relates to the new material being learned has the potential to greatly influence the successful integration of the new material in long term memory. Instruction that is designed to build new schemata carefully will allow information to be fully integrated into long-term memory which aids in the processing of new information with less mental effort and better learning outcomes (Poffenbarger, 2017).

The CLT provides a framework for understanding cognitive processes that lead to effective instructional design. Data collected in this study indicated whether teachers

perceived the orthographically irregular English code as an extraneous load to be taught sequentially, or whether there is interactivity between Hebrew and English that allows for simultaneous instruction. The sequence of dual literacy instruction is therefore intrinsically connected to the CLT.

Literature Review Related to Key Concepts and Variable

In this literature review, I present and synthesize studies related to the purpose of this qualitative study to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. I discuss literature in this section related to the influence of early literacy learning on reading achievement, literacy curriculum, dual literacy learners, simultaneous versus sequential instruction, heritage language learners, and educators' perceptions of effective heritage language literacy instruction. Finally, I relate the literature to the research questions and provide information to illustrate why the approach selected is meaningful to this study.

Influence of Early Literacy Learning on Reading Achievement

Literacy has been a focus of concern in America for many years. Researchers' findings provide evidence that quality literacy instruction results in improved academic achievement (Brown, 2014; Foorman et al., 2017; Gunning, 2019; Saracho, 2017). Especially in the early grades, effective teaching of literacy has the potential to place children on an improved trajectory that positively influences future academic achievement, careers, and life outcomes (Parkinson, Meakin, & Salinger, 2015).

A study of reading assessment scores administered in early childhood and elementary schools indicated there is a significant correlation between early literacy proficiency and reading fluency performance in Grades 3, 5, and 7. Results of Grade 3 achievement tests, for example, were best predicted by early childhood scores in fluency, phoneme segmentation, and initial sound fluency (Utchell, Schmitt, McCallum, McGoey, & Piselli, 2016). Focusing on early literacy instruction, and prevention and intervention of potential reading difficulty in kindergarten through Grade 2 is therefore optimal because literacy delays are costly and challenging to remediate when students enter the older grades of elementary school (Dombek, Foorman, Garcia, & Smith, 2016)

Literacy Curriculum

Curricular content comprised of directly teachable skills, with guidance for implementation, strongly supports positive reading outcomes. Clearly predictive relationships exist between effective literacy instruction and long-term literacy success (Snow & Matthews, 2016). King and Butler (2015) note that effective emergent biliteracy instruction is increasingly necessary in a country where the number of ethnically diverse and multi-cultural students continues to grow, with culturally diverse students estimated to increase to 52% of the student population, from the current 48%, by 2021 (National Center for Education Statistics, 2013).

Biliteracy learners often evidence poor literacy achievement due to a shortage of teachers trained to effectively teach both English and a foreign language (Ortiz, 2018). Biliteracy acquisition is dependent on the specific combination of languages in question and does not manifest itself equally across all combinations. Differences in alphabet

formation, age of the child, fluency in the languages, and depth of orthography are all important factors to consider when designing curriculum (Lallier & Carreiras, 2018). It is, therefore, necessary to develop an increased understanding of instructional strategies specific to dual literacy learners so that early childhood classrooms can include effective dual literacy instruction in their classrooms.

There is no single early reading curriculum that has been found to be effective across all educational settings. Kostelnik, Whiren, Soderman, and Rupiper (2018) posited that teachers must use their knowledge and skills to adapt strategies to match the ability, interests, and needs of their students. Heritage language learners have specific needs that must be understood in order to increase the understanding of effective sequence of instruction (Chan & Sylva, 2015). One size does not fit all when it comes to bilingual reading acquisition; curriculum must be tailored to specific learners and languages in order to result in reading success (Kovelman, Salah-Ud-Din, Berens, & Petitto, 2015).

As previously noted, factors including age and developmental stage of the learner are important considerations when designing curriculum. Kovelman et al. (2015) examined the most effective method of biliteracy instruction based on the age at which children were exposed to the second language. In a study of 56 Spanish-English bilingual children, those children who were exposed to Spanish at an early age (before age 3) benefited from instruction that emphasized a whole language approach. On the other hand, children who had later bilingual exposure, which correlates with the student population noted in the problem statement, had improved results associated with an emphasis on phonics. It is necessary to research this effect on bidirectional Hebrew-

English literacy instruction as well, because this study, and those similar, are found in languages such as Spanish and English, which share directionality. It is important to investigate educators' perceptions concerning simultaneous or sequential instruction strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English speaking emergent literacy learners in Hebrew day schools.

Dual-Literacy Learners

Early acquisition of the alphabet is a predictor of later literacy acquisition. Roberts, Vadasy, and Sanders (2018) explored the complex cognitive processes required to learn an alphabetic code. In a study conducted with 83 preschool students, including 30 dual language learners, paired-associative learning, articulation referencing, and orthographic learning were identified as cognitive components of alphabetic instruction. Explicit alphabet instruction that incorporated instruction aligned with cognitive learning processes evidenced positive results.

The early acquisition of two alphabetic codes requires additional understanding so that early childhood classrooms can include effective methodology when teaching dual literacy learners (Chan & Sylva, 2015). Guida et al. (2018) found that mental organization of sequencing related to literacy varied with reading and writing direction of the heritage language. The instructional component relative to Hebrew-English dual language learners is compounded by the fact that Hebrew is read right-to-left, while English is read left-to-right. Orthography-specific brain development was found to influence the reading achievement in young children learning two alphabetic codes and was therefore deemed to have important educational implications (Jasińska, Berens,

Kovelman, & Petitto, 2017). The issue of bidirectional Hebrew-English emergent literacy instruction has not been well-studied because research on mono-directional orthographies dominates the biliteracy literature (Maciel et al., 2018). Son (2017) suggested that further research is needed to examine and improve heritage language instruction of specific language pairs because the majority of heritage language research focuses on Spanish-English dual literacy programs.

Researchers have observed the positive aspects of dual literacy. Positive cross-linguistic effects between languages have been discovered, even though the language pairs may be dissimilar (Berthele & Vanhove, 2017). Even in contexts of different orthographic systems Language 2 (L2) learning had a positive effect on Language 1 (L1) development (Hussein, 2014). It is, therefore, important to research early dual literacy of heritage language learners because learning to read a second language supports the development of the first language (Lyseng et al., 2014).

Simultaneous Versus Sequential Instruction

Researchers are divided regarding the advisability of presenting dual orthographies simultaneously or sequentially. Berens et al., (2013) conducted a study in which the authors explored whether it was advantageous to learn to read in two mono-directional languages simultaneously, during the same developmental time period, or sequentially. This research studied English-speaking students enrolled in both sequential and simultaneous English-Spanish dual language programs. In the sequential program 90% of the instructional day was dedicated to language and literacy learning in the minority, non-dominant language (Spanish), with the dominant language (English) being

introduced in small increments over time. The students enrolled in the sequential program had a greater percentage of children who mastered phonological awareness and reading decoding, with 49.61% of participants reading English non-words, compared to 30.29% in the simultaneous program where the minority and majority language and reading were introduced in equal amounts of time. Researchers' findings provided evidence that sequential learning may provide biliteracy benefits for phonological awareness and reading decoding tasks and indicated that the sequence of instruction is a strong factor in successful phonological awareness and decoding of dual literacies (Berens et al., 2013).

Agheshteh (2015) concurred with this finding and stated that early learners who have the opportunity to practice letter-sound mapping in their second language read more fluently and accurately in their first language. Similarly, Ahmadi and Mohammadi (2019) noted the advantages of sequential instruction but charged researchers to further investigate the influence of counter-sequencing, which they found unaddressed in the field of literacy. Finally, Velasco and Fialais (2018) posited that sequential biliteracy instruction is a sound practice when working with heritage language learners who come from monolingual homes and are expected to learn the heritage language in a school setting.

Researchers have also found that there are advantages to teaching dual orthographies simultaneously. Benefits of simultaneous, early dual literacy instruction includes fostering respect for cultural diversity which motivates students from different ethnicities to excel academically (Valenzuela, 2017). Students who are literate in their heritage language from a young age are less likely to distance themselves from their

cultural practices (Rosowsky, 2019). Finally, simultaneous learning of students' heritage language indicates to the children the importance of biliteracy acquisition from a young age (Brannon, 2019). Simultaneous dual-literacy instruction may, therefore, promote the importance of heritage learning to early learners.

It is widely recognized that when dual literacy is presented simultaneously, literacy skills learned in one language transfer to a second (Cummins, 2012), however this effect is further pronounced when features are shared by the two languages (Kuo, Uchikoshi, Kim, & Yang, 2016). Velasco and Fialais (2018) studied effective simultaneous French-German dual literacy instruction in a kindergarten class in Alsace, France. In concurrence with the research noted above, 5-year-old children were successfully and simultaneously introduced to two languages that share similar print characteristics and phonology. Similar research was conducted with Spanish-English orthographies which share alphabetic codes and directionality (Lopez-Velazquez & Garcia, 2017; Raynolds, López-Velásquez, & Olivo-Valentín, 2017). Although simultaneous instruction was found to be effective in these studies, the researchers studied Spanish and English, which are a mono-directional pair. Furthermore, the students who were studied spoke the minority language at home and were being taught English as a foreign language in school. However, this study focused on children who speak English as a first language and who are taught to acquire Hebrew as a heritage language. There is limited research that provides evidence whether cross-linguistic advantages affect young learners of typologically different languages (Hsu, Ip, Arredondo, Tardif, & Kovelman, 2019). Researchers agree that additional studies are

needed to learn how the brain learns a second language after the first language is acquired.

Kim et al., (2016) stated that age of acquisition, similarity of the two orthographies, as well as exposure and proficiency to the second language, are important factors in this research. Specifically, the language pairs in question are pivotal when designing instruction because acquisition of one orthography influences the acquisition of the second. Children's early reading competency in both languages is directly correlated with their later reading comprehension (Verhoeven, Voeten, & Vermeer, 2018) and it is thus imperative that students' introduction to L1 & L2 be based on quality, evidence-based instruction.

Hebrew-English Heritage Language Learners

In an increasingly globalized world, multilingualism is frequently linked to such topics as cultural identity and the promotion of heritage languages. Language and literacy are used to unify communities and promote belief systems and heritage values. Minorities often develop individualized language and literacy policies for heritage language learners that can potentially transfer to different groups (Tannenbaum & Cohen, 2017). Hebrew and Arabic are two languages commonly associated with heritage language learning.

Education is one of the ways that one generation seeks to influence and shape future generations. Schools have historically played a leading role in this attempt (Miller, 2016). The Jewish heritage is transmitted through the Hebrew language which serves as a common symbol of Jewish identity (Twerski, 2001). In Hebrew day schools that educate Orthodox Jews, the purpose of studying original texts is not only for the transmittal of

heritage but also is actually a religious duty because a pious Jew lives life by following

the dictates of the Torah, the Jewish Bible. The Jewish educational system places

significant emphasis on Hebrew reading because Judaism relies on Hebrew reading for

both prayers and the study of the Scriptures (Cutaru, 2015).

Prayer is integral to Jewish heritage and has, as its foundation, the ability to read

the Hebrew language. Prayer is a key element in the heritage of the Jewish people as it

forges a feeling of connection and a close relationship with the God of history

(Coopersmith, 2016). Hebrew day schools, which seek to impart spirituality and religious

values in their program, therefore, include daily prayers as part of the curriculum.

Orthodox Hebrew day schoolteachers interviewed in the United Kingdom (Kohn, 2019)

noted that early exposure to prayer services has, as an additional goal, exposure and

familiarity with the Hebrew language necessary for the study of sacred texts. Thus,

learning to read Hebrew fluently is a prerequisite for praying, and praying serves to

reinforce Hebrew literacy in preparation for learning original Hebrew texts.

In Judaism, prayer and study are intrinsically connected as Jews perform both

obligations in the same house of worship. The Talmud, the compilation of Jewish Oral

Law, states that "the place where the teaching is, there should be the prayer, too" (*Talmud

Bavli, Tractate Berachot*, folio 6), which leads to the conclusion that teaching children to

pray and read the original Hebrew texts is of paramount importance to religious Jews.

The Talmud also notes that an inquiry was conducted from the northern tip of Israel to

Beersheba (the southernmost point) and an illiterate could not be found. Furthermore,

from Givat to Antifras (the breadth of Israel) no child, boy or girl, was found who was

not literate in complex Jewish law (*Talmud Bavli, Tractate Sanhedrin*, folio 94). The quest to eliminate illiteracy was established for the Jewish people nearly 29 centuries ago. Jewish children's Hebrew language education is not simply a responsibility, it is a requirement of Jewish law.

Originally, Jewish education focused on teaching only the Hebrew language, and not the national language, to early readers. However, in the late 17th and early 18th centuries education faced the social realities that emerged as Jews left their self-imposed ghettos (Miller, 2016). As the Jews who lived in Europe during that era attempted to integrate into their host communities, children were taught the language and literacy of the society in which they lived (Cutaru, 2015). In contemporary society, Orthodox Jewish students attend Hebrew day schools where both religious and secular knowledge is transmitted. In Hebrew day schools, prayer from original Hebrew texts and study of sacred texts are included as early as kindergarten, which means that young children must learn to read Hebrew at a young age.

Decisions and choices related to a religious school's literacy curriculum are influenced by ideological and ethical considerations and reflect the community's cultural and social perspectives (Tannenbaum & Cohen, 2017). Minority groups must continuously adjust the curriculum to maintain its distinct identity on one hand, while balancing societal integration on the other. This challenging dichotomy is influenced by a dynamic linguistic landscape.

Changing social contexts have resulted in contemporary Orthodox Jewish students enrolling in school speaking English as their first language. This is quite a

different situation than that which existed when the language of the host country was first introduced centuries ago. At that time, students spoke Hebrew or Yiddish at home in sheltered communities and came to school to learn the host language as a foreign language (Cutaru, 2015). In the 21st century, many children come to Hebrew day schools speaking English and are first exposed to the Hebrew alphabet and vocabulary in preschool (Klein, 2018). The fact that the heritage language is being learned after the student speaks English fluently, requires an examination of the different interactions between the languages. Study of the most effective sequence of early Hebrew and English literacy instruction is especially relevant since, as noted above, the Hebrew language must be taught to emergent readers so that students can pray and learn sacred texts at a young age, as required by Jewish tradition.

Faith-based schooling is not limited to Hebrew day schools, although the patterns that emerge from the studies are similar. Rosowsky (2019) compared the teaching of Hebrew to English speakers to teaching Muslim students liturgical literacy for the purpose of studying the Quran in the United Kingdom. A central element of education in mosque schools is the acquisition of Arabic literacy skills (Sözeri, & Altinyelken, 2019). Compared to studies on Arabic-English literacy instruction conducted 20 years ago, current research indicated that there has been a shift to English as the main language used to communicate within the Muslim population, as well as in the mosque schools (Rosowsky, 2019). Increasing use of bilingual and English language teaching resources and practices have made faith-based literacy instruction more complex. Mirroring instruction in Hebrew day schools, the classic Arabic language used to read the Quran is

now taught in English, rather than through traditional community languages as it once was. These patterns of fluidity of linguistic experience, found in both Arabic and Hebrew religious schools, are referred to by Creese and Blackledge (2011) as "flexible bilingualism" (p. 1197), which obligates educators of heritage language learners to examine dual literacy instruction and explore the way that heritage language experiences alter the way bilinguals learn to read.

Teachers' Perceptions

Collecting data from teacher participants allowed for an overview of the complex practices involved in teaching dual literacy learners. Bilingual literacy involves the sequence and ratio of L1 and L2 classroom instruction, the language pair being introduced, and the strategies implemented by the classroom teacher (Schwartz & Asli, 2014). Teachers face daily challenges when navigating a curriculum designed to teach two languages (Gort & Pontier, 2013). Menken and Garcia (2010) emphasized the influential role teachers play in designing and implementing bilingual instruction and noted "there is typically space for policy negotiation in classroom practice" (p. 1). Because of this autonomy, it is widely accepted that early childhood teachers are pivotal in providing literacy experiences and instruction that support later literacy development (Dombek et al., 2016; Parkinson et al., 2015; Saracho, 2017; Utchell et al., 2016). However, there is little evidence of how teachers implement biliteracy practices with emergent dual-literacy learners (Butvilofsky, Sparrow, Roberson, & Hopewell, 2017). Implementing effective biliteracy is dependent on teachers' choices and understanding of the two orthographies being taught (Velasco & Fialais, 2018). Educators' perspectives of

dual language and literacy are of paramount importance, regardless of the language pair (Schwartz, Koh, Chen, Sinke, & Geva, 2016) and students' prior exposure to the languages.

Kovelman et al. (2015) posited that bilingual students have different literacy learning needs depending on their exposure to the second language and that there is no single approach that is necessarily effective when introducing dual orthographies. Furthermore, foreign language teachers have stated that there is a gap between dual literacy instructional theory and classroom practice (Fuchs, Kahn-Horwitz, & Katzir, 2019). Sawyer et al. (2016) found that bilingual teachers of dual literacy learners reported use of few evidence-based literacy practices when working with their dual language students. Educational implications of these studies thus indicate a need for additional examination of educators' perceptions of practice in dual literacy classrooms and professional training in pedagogy aimed at biliteracy acquisition (Vaisman & Kahn-Horwitz, 2019).

There are numerous advantages to eliciting educators' perceptions of dual literacy instruction. By exploring educators' perceptions, beliefs, and practices, teachers in graduate-level education programs, as well as literacy coaches, may be better equipped to relate research findings to students' needs (McKenney & Bradley, 2016). Professional development that validates, recognizes, and respects teacher input will be more likely to elicit cooperation from the teachers who will be implementing the changes (Donnell & Gettinger, 2015). Finally, by conducting research with educators in the field, learning needs can be identified before designing curriculum (McKenney & Bradley, 2016)

Educators' perceptions, as used in this dissertation, include what teachers think and know, their perspective on how instructional practices should be implemented, and the role in which they see themselves in the teaching and learning process (Bandura, 1986).

Summary and Conclusions

The literature review serves to present an understanding of the problem for the purpose of providing a rationale for conducting this research. The literature review is divided into two sections. The first subsection contains detailed information regarding the conceptual framework. Sweller's (1988, 1994, 2010, 2019) CLT proposed an understanding of how the brain works for the purpose of developing effective instructional design of new information. By structuring the research through the perspective of the CLT, I was able to examine educators' perspectives of approaches and strategies being used to teach the Hebrew heritage language to English speaking early literacy learners.

The first section of the literature review includes a review of the cognitive architecture (Baddeley, 1992) including sensory, working, and long-term memory and their roles in learning new material. The three categories of cognitive load - intrinsic, extraneous, and effective are then defined and placed into the context of literacy learning (Paas et al., 2003). Specific to this study, the relationship between dual literacy needs of heritage language learners and cognitive load are explored (Moussa-Inaty et al., 2019). The sequence of instruction of the language pairs is further detailed as research exists that supports both sequential, as well as simultaneous instruction of dual orthographies.

The second section of the literature review relates to key concepts and variables related to early literacy and the importance of having a literacy curriculum to guide instruction (Snow & Matthews, 2016). The need for effective biliteracy instruction is evidenced (King & Butler, 2015) and the need to tailor programs and curriculum for specific dual literacy populations is also included in the literature review (Lallier & Carreiras, 2018). Challenges and benefits of dual literacy are explored (Berthele & Vanhove, 2017) and the specific needs of Hebrew heritage language learners are studied (Cutaru, 2015). Finally, the importance of examining educators' perceptions of literacy instruction is detailed and shown to be pivotal in proving quality early literacy instruction (McKenney & Bradley, 2016).

The conclusion that may be drawn from this literature review supports the purpose of this dissertation. There is a gap in the research about practice pertaining to effective instruction of early literacy to Hebrew-English heritage language learners. The positioning of heritage language learners' reading instruction requires examination of timing and sequence of instruction to make new insights possible (Ortega, 2019). Educators' perceptions of effective curriculum design are therefore needed to provide equal educational opportunities thus effecting positive social change for our growing dual-literacy population. Minority heritage language learners and their specific literacy needs must be addressed for the purpose of equitable multilingualism (Ortega, 2019). The discussion of the methodological approach for this study follows in Chapter 3.

Chapter 3: Research Method

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. In Chapter 3, I discuss the research design and rationale for using a qualitative case study to explore the perceptions of preschool teachers in Hebrew day schools who are charged with teaching Hebrew literacy to English-speaking heritage language learners. I include an explanation of the methodology that I implemented to conduct the research and provide a thorough description of the study's setting and sample selection process. Additionally, I include an explanation of the instrumentation and operationalization, as well as methods used for data analysis in this chapter. I conclude the chapter by discussing threats to validity and ethical procedures.

Research Design and Rationale

I used a case study design to explore preschool teachers' perceptions of effective Hebrew-English instructional design. The following research questions were used to guide the study:

RQ1: How do preschool educators perceive simultaneous instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ2: How do preschool educators perceive sequential instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ3: How do preschool educators perceive the effectiveness of teachers' simultaneous instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

RQ4: How do preschool educators perceive the effectiveness of teachers' sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

The study of effective instructional design is based on Sweller's (1988) CLT. CLT is based on the concept that instruction must align with cognitive processes (Sweller, 1994). Early literacy instruction is pivotal for future academic success (Snow & Matthews, 2016). With an increasing number of bilingual students enrolled in United States schools, it is necessary to address effective biliteracy instruction (King & Butler, 2015). Chan and Sylva (2015) noted that further insight is needed into the early acquisition of two orthographies. Researchers concur that sequence of instruction is one of the factors that must be considered when designing biliteracy instruction (Kim et al., 2016). Cognitive load is affected by the order in which information is presented (Sweller, 2010) and was, therefore, an appropriate conceptual framework upon which to base this research.

Depending on the goal and intent of a study, quantitative or qualitative research methods may be used (Yin, 2016). Qualitative research acknowledges more than one reality from a relativist viewpoint (Ravitch & Carl, 2016). Qualitative studies are

effective when interviewing and observing individuals in naturalistic environments for the purpose of obtaining the individuals' perceptions and gathering vivid descriptive data (Rubin & Rubin, 2012). Reports may be presented in a narrative format that aligns with the instrumentation used to collect data (Ravitch & Carl, 2016). Finally, qualitative research inductively searches for meaning by using the researcher as the primary agent for rich data collection (Saldaña, 2016).

Quantitative research may be required when exploring an issue that is context-specific (Yin, 2016). A quantitative approach is an appropriate research method when the researcher is seeking statistical data based on the scientific collection of facts (Babbie, 2017). The positivist perspective aligns with quantitative research where the ontology is that the truth can be discovered by using carefully controlled research methods and true claims of knowledge can be made only through the use of the scientific method (Burkholder, Cox, & Crawford, 2016). However, for this study, a qualitative approach is the best design to investigate preschool educators' perceptions concerning simultaneous or sequential instruction strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew day schools.

There are numerous qualitative designs from which to choose, including grounded theory, ethnography, action research, phenomenology, and critical theory (Yin, 2016). These designs, however, would require a lengthier time period or would not be an effective strategy to gather the information needed to address the research problem. I chose to use an exploratory qualitative case study for the design of this doctoral study

because the investigation of educators' perceptions produced participant feedback and insights that can effectively be collected through interviews.

A qualitative case study is an effective design when researching a topic that has not been well-explored (Ravitch & Carl, 2016). Educators' perspectives on simultaneous or sequential bidirectional early literacy instruction has not been well researched, with mono-directional biliteracy research more prevalent in the literature (Maciel et al., 2018). A case study is a primary data source that can be used to address the gap in research about practice regarding effective sequence of biliteracy instruction to English speaking heritage language learners (see Yin, 2016). A qualitative approach was appropriate for this study because it allowed me to examine data related to real-life phenomena using a small number of educator participants as subjects (see Yin, 2016). Furthermore, a case study is suitable when the context and phenomenon to be explored are inseparable (Ravitch & Carl, 2016). Educators' perspectives and classroom experience are inextricably connected, and a case study allowed for knowledge to be derived from actual experience and not only from theory or belief (Rubin & Rubin, 2012).

Interviewing is an effective method of gathering primary data for the purpose of filling a gap in the literature regarding bidirectional heritage learners' literacy instruction (Saldaña, 2016). Responsive interviewing was used to allow for genuine dialogue in an unintimidating environment. A comfortable setting and natural conversation permitted teachers' perceptions to be fully explored (Rubin & Rubin, 2012). I chose to use semistructured interview questions (see Appendix A) because it allowed me to obtain an in-depth description of educators' perceptions in a naturalistic environment without any

manipulation on the part of the researcher (see Yin, 2016). A qualitative case study may provide educators the opportunity to share their perceptions of effective early biliteracy instruction.

Qualitative research entails the use of inductive reasoning by a researcher responsible for data collection and analysis (Yin, 2016). I considered quantitative and mixed methods designs when designing this study; however, I deemed the rich description that results from qualitative interviewing most appropriate to facilitate a true understanding of educators' perceptions of effective biliteracy instructional design.

Role of the Researcher

Qualitative research, used in social-behavioral studies, is a means to gather data using nonnumerical data. Interviews reveal real-life data more effectively than external instruments (Yin, 2016). As the researcher of this study, I was the exclusive instrument to collect data. Data collection requires the researcher to listen actively, ask questions, monitor time, distinguish evidence, and triangulate data (Yin, 2016). I put much effort into listening carefully to participants' responses to the interview questions and reflectively documenting unspoken communication, including inflection and tone, so that I fully comprehended their answers. My role as the researcher was also to systematically analyze these data and establish themes that described and consolidated the gathered information (see Rubin & Rubin, 2012).

I was the only individual conducting the preschool teachers' and preschool coordinators interviews for this study. As the data collection relied solely on me, I was focused and prepared. Investigator bias must be proactively addressed in qualitative

research (Rubin & Rubin, 2012). I have been an educator in the Jewish community in which this study took place for over 30 years, but I worked mostly with high school and college level students until 3 years ago. I am currently a principal in a private elementary school where I work exclusively with children in elementary school. Because I have never worked in a preschool setting, current and former educational experience did not interfere with the trustworthiness of the data being collected. To proactively prevent any possible bias, however, I only interviewed teachers with whom I was not personally or professionally acquainted on any level. I did not include participants who currently work in my work environment to preclude the appearance of any supervisory differentials or conflict of interest if the educators' perceptions do not align with that of the elementary school administration. By including only educators with whom I had no previous interaction, the potential for participant bias was greatly mitigated.

Biases that I may have had because of preconceived attitudes and opinions were addressed through bracketing. Yin (2016) defined bracketing in qualitative study design as "trying to set aside the researcher's beliefs, values, predispositions, and prior assumptions" (p. 333). Rather than trying to deny potential bias, effective bracketing is proposed so the researcher can take a reflexive stance that involves time, planning, action, self-analysis, and feedback from others (Ahern, 1999). Journaling is an effective method to address bias that may be attributed to preconceived notions. Reflective writing facilitates self-examination, and I included journaling from the onset of the study when participants were recruited. Appraising my mindset regarding the research process after each interview further diminished any possible bias (Ravitch & Carl, 2016). Finally, bias,

vagueness, and tangential discussions were avoided by following preapproved interview protocol and questions.

Methodology

In this section I describe the methodology by which this study was designed. Using an exploratory qualitative case study, I used purposeful sampling to recruit participants who teach in Hebrew day schools within a densely populated northeastern city in the United States. I explored the perceptions of 21 preschool educators who teach bidirectional Hebrew-English literacy to young heritage language learners. I used semistructured interviews to collect data and answer the study's research questions. I discuss methods of participant recruitment and data analysis in this section.

Participant Selection

The sampling selection for this qualitative case study was purposeful. I chose preschool teachers to assist me in collecting relevant and descriptive data that expanded the amount of information that may currently exist (see Yin, 2016). The sample included 12 preschool teachers who have a minimum of 5 years of teaching biliteracy to heritage language learners. I invited three teachers from Hebrew day schools who instruct only male students, four teachers from Hebrew day schools that instruct only female students, and five teachers from Hebrew day schools that instruct in mixed gender settings. I also invited nine preschool coordinators to participate for the purpose of triangulating data (see Patton, 1999). Although there is no universally accepted way to identify optimal sample size (Rubin & Rubin, 2012), Maxwell, Delaney, and Kelley (2017) opined that research is effective when sample sizes are small so that the qualitative researcher can

obtain greater depth of information from each participant. Because individuals have the potential to provide many opinions and beliefs, a small sample size of one to 10 persons is sufficient to produce ample data (Starks & Trinidad, 2007).

Using a community telephone directory, I called preschool coordinators in Hebrew days schools in a northeastern city heavily populated by Jewish residents. After introducing myself, and explaining the purpose of my research, I requested assistance in recruiting volunteers who would be willing to share their experience of teaching biliteracy to Hebrew-English heritage language learners. I requested names, e-mail addresses, and phone numbers of preschool teachers who have a minimum of 5 years of experience teaching so that the purposeful sample would have sufficient knowledge and information about this topic. I also asked the preschool coordinators if they would be willing to participate in a 30-minute interview.

I then called or e-mailed the potential participants and explained the purpose of my research. I requested between 45 minutes and 1 hour of their time during a school day for an interview, as well as 15 minutes for a follow-up phone meeting to member check findings of the study, after the data had been analyzed.

I shared my personal e-mail address and cell phone number for ease of response for interested volunteers and gave all potential participants 7 days to respond. I received more than 12 responses and chose participants based on the teachers' educational background and number of years of experience teaching biliteracy to Hebrew-English heritage language learners. Furthermore, the school's demographics were considered in order to reflect the participant pool and present a cross-section of the community's

Hebrew day schools. Teachers who responded but did not meet the criteria for inclusion in the study were thanked for showing their interest in this study.

All initial expressions of interest from prospective participants were returned with the participant questionnaire (see Appendix B and Appendix C). This screening questionnaire determined the number of years the prospective participant has been teaching, his/her educational background, and the demographics of the school in which the respondent works. Participants who are knowledgeable in the art of teaching Hebrew as a heritage language provided perceptions that are broad and based on experience. Finally, educators selected from Hebrew day schools that are open to improving their methodology may be motivated to share their perceptions for the purpose of designing an effective Hebrew-English early literacy curriculum. This approach to participant selection aligns with a qualitative approach to designing a case study for the purpose of gathering data on teachers' perceptions of biliteracy instructional design.

Instrumentation

Data collection is an important component of qualitative research. In this exploratory case study, I used interviews with preschool teachers and preschool coordinators to collect data. An effective data collection method in qualitative research is the use of interviews (Yin, 2016). Interviewing both teachers and coordinators provided a means to augment and triangulate the data collected (Patton, 1999).

Interview instrumentation. Interviewing is an art that gives participants the opportunity to share information that contributes to the understanding of a specific phenomenon (Ravitch & Carl, 2016). Rubin and Rubin (2012) explained that in-depth

interviews allow researchers to examine the perceptions and thoughts of participants to understand their views. For this study I developed an interview protocol to answer the research questions (see Appendix A). The interview questions were constructed so that the information that resulted from the interview can be expected to answer the research questions. I used literature on bilingual instructional practices (Agheshteh, 2015; Berthele & Vanhove, 2017; Brannon, 2019; Chan & Sylva, 2015) as a guide to structure the interview questions.

To increase content validity of the interview protocol (see Ravitch & Carl, 2016), the interview questions were reviewed by two preschool teachers with over 10 years of experience working with Hebrew day school students, and a preschool administrator with over 30 years of experience teaching Hebrew and English to early biliteracy learners. The reviewers were not part of the study's potential volunteer participants. The reviewers checked to make certain the interview questions were inclusive, appropriate, and focused so that the responses would produce relevant data that answer the research questions of the study. Having multiple reviews of this researcher-developed instrument assisted me in revising any questions that may not have been clear to the volunteer participants of the study, and thus increased content validity.

The use of open-ended questions allowed the preschool teachers to provide responses that answered the research questions which ground this case study (Yin, 2016). The interview questions included prompts that guided the dialogue (Yin, 2016). Further responses were collected by asking probing questions to clarify and substantiate the evidence (Rubin & Rubin, 2012).

Elaboration was encouraged because thorough and comprehensive questioning results in deeper insight and understanding of the facts (Blome, von Usslar, & Augustin, 2016). Validity was established by prompts and field notes that connected the data to the original protocol (Yin, 2016). I recorded my thoughts and reflections in a researcher journal that complemented the information gleaned from the interviews and provided contextual information to enhance the understanding of the responses.

Procedures for Recruitment, Participation, and Data Collection

Participants in this study included 12 certified preschool teachers in Hebrew day schools with a minimum of 5 years of experience teaching Hebrew-English bidirectional orthographies to early heritage language learners. Participants also included nine preschool coordinators in Hebrew day schools with a minimum of 5 years of experience coordinating Hebrew day school programs to substantiate evidence for this research study. Organized interviews were used to learn about people's perceptions (see Rubin & Rubin, 2012).

I recruited 12 teachers to be part of this study: three instructors from Hebrew day schools that enroll male students, four instructors from Hebrew day schools that enroll female students, and five instructors from Hebrew day schools that enroll students of both genders. I also recruited nine preschool coordinators: three coordinators from Hebrew day schools that enroll male students, two coordinators from Hebrew day schools that enroll female students, and four coordinators from Hebrew day schools that enroll students of both genders. The rationale for the selection of these participants was because such a cross-section of classroom settings provided specific and varied characteristics to

represent teachers' perceptions of early Hebrew-English heritage language learning. I recruited participants by using a community telephone directory to call Hebrew day schools in a heavily populated northeastern state in the United states. I asked the preschool coordinators to participate in a 30-minute interview. I also asked for e-mail and telephone contact information for preschool teachers of Hebrew-English early literacy. I called or e-mailed the preschool teachers and asked for their participation. If potential participants evidenced interest, I provided a screening questionnaire (see Appendix B and Appendix C). Participants who were selected were e-mailed or mailed a Walden University informed consent form and the preschool administrators of the schools in which the participants teach were also e-mailed a letter of permission form that provided permission to interview participants. The interviews were scheduled in advance and projected to take between 45 minutes and an hour to complete. Coordinator interviews were projected to take approximately 30 minutes to complete. A 15-minute phone meeting was scheduled for a follow-up session for the purpose of member checking the findings of the analysis of the data and provide further validity of the study.

Participation in all phases of the study was voluntary to prevent bias and allow me to create meaning from the data collected (Yin, 2016). The following list is provided to explain and ethically justify each component of the recruitment and participant process prior to data collection.

1. Obtain provisional Walden University Institutional Review Board (IRB) approval.

2. Acquire names of potential participants for this study from a community telephone directory.

3. Obtain formal approval from the data collection locations.

4. Recruit qualified pre-school teacher and coordinator participants via a phone call or an electronic informational invitation to participate.

5. Send screening questionnaire to potential volunteer participants who respond.

6. Acquire written informed consent and made a copy for each participant.

7. Obtain permission from preschool administrators to interview participants.

8. Schedule interviews to be conducted via telephone

9. Remind preschool teacher and coordinator participants of their interview via a phone call or e-mail a day prior to their scheduled date and time.

Recruitment and participation steps. The recruitment process began only after I received permission from Walden's IRB to commence with the study. I recruited participants from Hebrew day schools in a densely populated city in the northeastern United States. A list of Hebrew day schools was culled from the community's telephone directory. Next, I called or sent out an electronic invitation via e-mail to the administrative personnel of the Hebrew day schools requesting the participation of preschool teachers and coordinators for this research study. I obtained formal approval for data collection and requested the names, e-mail addresses, and telephone numbers of potential participants. I then called or sent an e-mail message that included the purpose of the study, sample questions, and an estimation of the time needed for participation in the interview and follow-up meeting that would ensure accuracy of the analysis.

Teachers who responded to the initial request for participation were sent a screening questionnaire (see Appendix B and Appendix C) that included detailed questions regarding the teacher's educational status, teaching experience, and current classroom setting. I chose 12 teachers and nine preschool coordinators with a minimum of 5 years of teaching experience from among the respondents to represent a cross-section of Hebrew day school preschool educators, as previously described. Purposeful sampling allowed for inclusion of preschool teachers of single gender, mixed gender, and culturally differentiated classrooms, which broadened the transferability of the findings. Teachers chosen to participate in the study received a consent form to assure them of complete confidentiality as participants in this study. I informed teachers that responses would not be shared with the administration or other teachers participating in the study. I explained the potential for risk and the steps that were put in place to ameliorate any harm. These steps included omitting all teacher names and identifying details such as the city in which the research was conducted, and the names of the individual schools. The remaining applicants received a call or an e-mail thanking them for their interest.

Prior to the interviews I obtained written permission to audio record the interviews. Participants consented to the confidentiality guidelines and agreed to review the findings for the purpose of ensuring accuracy and trustworthiness. All participants were informed that the data would be securely stored for 5 years after the completion of the study. Participants were further notified that participation is completely voluntary and that the participants have the right to leave the study at any time. No compensation,

including monetary gifts or refreshments, were offered to the teachers participating in the study.

Finally, I created a schedule to interview preschool educators employed in the school. Before the scheduled interviews, a reminder of the date and appointment time was sent to the participants. The interview was recorded on my computer laptop and notes were taken in my reflective journal. Open-ended questions were presented in a teacher interview that took approximately 45 minutes to 1 hour, and a preschool coordinator interview that took approximately 30 minutes.

Data collection procedures. The steps for data collection included the following process:

1. Conducted responsive telephone interviews.

2. Transcribed interviews.

3. Organized and analyzed data.

4. Sent analysis of findings to participants.

5. Called participants to discuss findings to ensure accuracy of data.

6. Wrote the findings, interpretation, and recommendations from the study.

I conducted semistructured, interactive interviews via telephone. Each teacher participated in an interview that took between 45 minutes and 1 hour. Coordinators participated in interviews that took approximately 30 minutes. These interviews were audio recorded on a laptop. I subsequently transcribed each interview.

Following the data collection, I coded the data and created themes as noted in the data analysis plan below. I then arranged a 15-minute phone meeting with each

participant to confirm accuracy of the findings of the analysis of the data. During this meeting I reconfirmed the purpose of the research with the teacher. Once member checking of the findings was complete, I summarized the findings and wrote recommendations that may be helpful in designing biliteracy instruction for Hebrew-English heritage language learners.

Data Analysis Plan

Qualitative analysis requires that data be reduced, displayed, and summarized (Ravitch & Carl, 2016). Qualitative data analysis requires the researcher to combine sufficient evidence with reflection of other possible conclusions (Rubin & Rubin, 2012). Data analysis must focus on answering the research questions that frame the study (Ravitch & Carl, 2016). The purpose of this analysis plan was, therefore, to gather comprehensive and descriptive data from preschool educators for the purpose of answering the research questions:

RQ1: How do preschool educators perceive simultaneous instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ2: How do preschool educators perceive sequential instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ3: How do preschool educators perceive the effectiveness of teachers' simultaneous instructional strategies when teaching dual bidirectional alphabetic

codes of English and Hebrew to English-speaking early literacy learners in

Hebrew day schools?

RQ4: How do preschool educators perceive the effectiveness of teachers'

sequential instructional strategies when teaching dual bidirectional alphabetic

codes of English and Hebrew to English-speaking early literacy learners in

Hebrew day schools

The following steps were taken during this process:

1. Organized and analyzed data.

2. Sent analysis of findings to participants to ensure accuracy.

3. Wrote the findings, interpretations, and recommendations from the study.

Yin (2016) encouraged a 5-step data analysis cycle: (a) compile, (b) disassemble,

(c) reassemble to discover emergent patterns, (d) interpret, and (e) conclude. I did not use

a qualitative software package to analyze the data. The overall steps for the analysis of

this study followed this process. I also used a four-phase content analysis of the data

during the emergent pattern stage (see Bengtsson, 2016).

Compile. Compiling data began once I completed all 21 interviews. The initial

step in analyzing the data was to transcribe the educator interviews. I used a reflective

journal that complemented the data and augmented the study's trustworthiness (see

Creswell & Creswell, 2017). During the first stage of data compilation, I read the data

with Sweller's (1988) framework of CLT in mind and recorded my thoughts in the

reflective journal. I continued to use this reflective journal throughout the data collection

and analytical process to ensure that all components of the research process were aligned

and focused on the final goal of finding answers to the study's research questions. I further compiled data by categorizing data on teachers' educational background, experience, classroom demographics, and setting. These data were matched to the information obtained in the teacher's interview to triangulate the data and confirm that the teacher's perceptions and instructional practices were aligned.

Disassemble. In this stage, I sought to become more familiar with the data that I transcribed and broke the data into smaller units that contained ideas and concepts in the data. I used open coding to present the data to decontextualize and examine the information obtained from the interviews to identify meaningful units (see Bengtsson, 2016; see Ravitch & Carl, 2016; see Yin, 2016). An inductive approach to data analysis allowed me to search for meanings from teacher and coordinator interviews. Using a hand-written spreadsheet, I highlighted and labeled significant sections of the transcripts. Significant statements included words, phrases, and sentences that related to teaching and coordinating programs for Hebrew-English heritage language learners.

Reassemble. The reassemble stage of data analysis sought to collect the codes gleaned from open coding to create sub-categories and categories that revealed emerging themes. During the second-stage coding process, I used pattern coding to assist me as I identified categories from the open and pattern codes to develop high-level categories (see Bengtsson, 2016; see Yin, 2016). Themes that emerged were the basis for the tentative conclusion and summary statement (Rubin & Rubin, 2012). I chose words from the data that stayed close to the text to phrase the themes that developed. These themes allowed me to situate the concepts in relation to each other and develop the findings of

the study to answer the research questions. Disconfirming evidence collected in the study was viewed as an opportunity to develop a more complex understanding and interpretation of the data (Ravitch & Carl, 2016).

Interpret. The primary purpose of the fourth stage was to formulate a narrative using the themes that emerged in the previous stage. I interpreted the data using tables that organized the codes, patterns, categories, and themes which allowed me to construct a narrative. By interpreting the data, I drew conclusions from the themes that were used to answer the study's research questions (see Bengtsson, 2016; see Yin, 2016). Appropriate quotes from the interview transcripts were used to illustrate and elucidate themes. To increase the credibility of the findings and interpretation, I sent each participant the findings of this study before finalizing my conclusions. A member check of these findings allowed the teachers to check for accuracy of the information to ensure that what I wrote was what the teacher meant to say and the findings reflected the developed themes. A follow-up 15- minute meeting, arranged as part of the initial consent agreement, was scheduled by telephone to confirm the accuracy of the findings and provided an opportunity to answer any questions the participants had.

Conclude. A conclusion is not merely a restatement of previously presented material. A conclusion is a narrative that may appeal for further research, challenge stereotypes, reveal original concepts, generate discoveries, or call for action (Yin, 2016). I completed the fifth stage with a conclusion that revealed the findings of this study regarding effective sequence of instruction for early Hebrew-English heritage language learning. Additionally, in this narrative I stated the need for further research because the

limited number of participants in a qualitative case study did not provide enough evidence for biliteracy curricular reform. This study provided a starting point from which to continue studying early biliteracy instruction of bidirectional orthographic codes.

<div align="center">**Trustworthiness**</div>

Data must be collected in a way that promotes internal validity. Trustworthiness is integral to the defense of qualitative case studies (Yin, 2016). Data must be analyzed accurately, and conclusions must align with evidence that was systematically and consistently collected (Ravitch & Carl, 2016). Transparency in data collection methods substantiates the study's authenticity and provides evidence of the accuracy of the conclusions.

Credibility

Credibility in research increases the validity of data collection and interpretation. I took field notes during the interviews so that I was able to provide evidence concerning what I was thinking at the time the interview was recorded and did not simply rely on my memory. Secondly, I cited previous research throughout the study to add credibility and built the findings of this study on prior peer-reviewed research (see Ravitch & Carl, 2016). Finally, review by member checking of the findings increased credibility because the interviewee had the opportunity to provide input into the outcomes of the study and the interpretation of the findings (see Yin, 2016).

Transferability

External validity in a qualitative study is referred to as transferability. Marshall and Rossman (2016) noted that transferability occurs when a study's findings are

considered applicable by another researcher. Efforts to ensure trustworthiness in data collection results in accurate data that are analyzed and organized so that another researcher may construe the information and results in the same manner (Yin, 2016). Detailed and rich descriptions provided by both preschool teacher and coordinator participants added to the validity and transferability of the study by allowing readers to reconstruct the findings. Shenton (2004) noted that even if a study's results cannot be replicated, individual components of the research can be transferred. I detailed the methods of data collection and instrumentation in this study so that elements of the study may be repeated. When a study's findings are credible, dependable, and confirmable they can be applied to other situations and are considered transferable.

Dependability

Dependability is linked to reliability so that other researchers could replicate the study and obtain similar findings. Each step in the research process must be documented for dependability (Yin, 2016). I documented the data sources, instruments, codes, categories, themes, and data analysis that were used to construct the findings of this study. Additionally, I used a record by journaling to record information regarding the process of data collection and increase trustworthiness of the data. I also used a reflective journal to document my thought processes as the data were gathered to provide evidence that the information was collected in an ethical manner (see Ravitch & Carl, 2016). By including this information, dependability was established.

Confirmability

When a study's results are based on the participants, and not the pre-determined results that the researcher has in mind, the results may be considered confirmable. The use of triangulation controls bias and establishes the study as objective (Yin, 2016). Bias was addressed by excluding teacher participants with whom I have a supervisory role. Furthermore, I used bracketing to marginalize preexisting biases that I may have had, which could have influenced the study's credibility. Researcher subjectivity is an issue that must be addressed in qualitative research (see Qutoshi, 2018). In this study, my potential biases were addressed by the use of bracketing, which identifies the researchers' prior knowledge and possible opinions before eliciting participants' perceptions. Bracketing helped me appreciate the teachers' viewpoints by sidelining my previous experience (Qutoshi, 2018). Finally, recording the interviews promoted confirmability because the results were based on facts and not memory (see Rubin & Rubin, 2012). Triangulation, bracketing, and recording of data are three methods that I used to ensure that the results of this study are confirmable.

<div align="center">

Ethical Procedures

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Professional associations sanction codes of ethics that must be followed when conducting research (Yin, 2016). Ethical standards require that the study's data collection methods and conclusions are based on trustworthiness, validity, and reliability (Yin, 2016). Researchers are charged with the most stringent ethical standards commensurate with scholarly integrity and must evidence fidelity and accountability at every stage of the research process (Ravitch & Carl, 2016).

I adhered to ethical procedures and did not recruit participants or begin this study until my proposal was approved by Walden University's IRB. Walden University's approval number for this study was 04-22-20-0796103. In anticipation of submitting this proposal, I completed the Collaborative Institutional Training Initiatives' Student Researchers Basic Course. I did not include any participants from any school in which I am now, or formerly was employed. Furthermore, I explained and clarified the interview process and provide verbal and written assurance that all data would remain confidential. I obtained written consent from each participant after I provided a description of the study, participant roles, and protocols at individual meetings. This precluded any potential conflicts of interest or supervisory issues with the participants. Furthermore, participation in this study was completely voluntary. Potential participants were not pressured or coerced to join the study. Any potential participant who chose not to be part of the study was thanked for their time and interest. Participants who decided to leave the study at any point in the process were released without any ramifications and another potential participant was invited to join in their stead. If a scheduled interview appointment was missed, another appointment was scheduled at a mutually convenient time. No negative occurrences happen during the data collection process, and it was not necessary to address any issues or offer the option of discontinuing participation.

Renumeration in this study was not provided because concern for curriculum improvement of Hebrew-English biliteracy is important and it would have been culturally inappropriate to offer an incentive to attempt to improve students' educational experience. Additionally, I offered to share the results of the study with the participants to

validate the time spent and empower the educators' practices to further explore effective literacy practices in the community.

To increase the ethical considerations of this study, computerized audio recordings that contain interview data were password protected on a laptop computer and copied onto a USB drive that was stored in a locked file cabinet in my home. A USB drive that contains the names and contact information of the educators was stored in a separate locked cabinet. Both USB drives were secured and will remain secured for 5 years after completion of the study. At the conclusion of 5 years, data will be deleted from the laptop, and the USB drives will be destroyed. Results of the study do not include any identifiers to protect each participants' privacy as guaranteed in the signed consent form.

Summary

Chapter 3 details the design, sampling procedure, population, data collection, data analysis plan, trustworthiness, and ethical considerations that I used to examine teachers' and coordinators' perceptions of effective early literacy instruction for Hebrew-English heritage language learners. I presented information regarding participant recruitment, interview protocol, and my role as researcher. I discussed the methodology that was used for this case study, including the methods that were used to collect qualitative data through interviews. Also discussed in this chapter is how the study was designed as a trustworthy qualitative exploration and the means by which I sought to maintain high ethical standards to conduct this research. Chapter 4 addresses how the data were analyzed, as well as how the results of the study answered the study's research questions.

The results revealed the perceptions of preschool teachers and coordinators charged with teaching early literacy to Hebrew-English heritage language learners.

Chapter 4: Results

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew day schools. The outcome of this research resulted in an increased understanding of current practice. This information may form a basis of knowledge upon which educators can reflect to determine the effectiveness of simultaneous or sequential instruction when introducing Hebrew and English literacy to early literacy learners. I conducted semistructured interviews and then transcribed, read, reread, highlighted, and coded the data to categorize the essence of the data. I then extrapolated themes to create summary statements and conclusions. I used reflective journaling and bracketing to address potential bias (see Yin, 2016). The following research questions grounded this study:

> RQ1: How do preschool educators perceive simultaneous instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

> RQ 2: How do preschool educators perceive sequential instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

> RQ3: How do preschool educators perceive the effectiveness of teachers' simultaneous instructional strategies when teaching dual bidirectional alphabetic

codes of English and Hebrew to English-speaking early literacy learners in

Hebrew day schools?

RQ4: How do preschool educators perceive the effectiveness of teachers'

sequential instructional strategies when teaching dual bidirectional alphabetic

codes of English and Hebrew to English-speaking early literacy learners in

Hebrew day schools?

I organize the results of the study in Chapter 4. I include and summarize the

setting, data collection, procedures, data analysis, results, and evidence of trustworthiness

in this chapter of the dissertation. Additionally, I address conditions and provide a

rationale for factors that may have influenced participants in this study after the proposal

design for this study was accepted.

Setting

The research was conducted in a heavily populated northeastern city in the United

States. At the time of this study, because of an unanticipated global health occurrence

resulting in school closures across the state, I interviewed all participants by telephone.

This pandemic also negated the possibility of using in-classroom observations. To

increase the credibility of the findings for the study, I included interviews with nine

preschool coordinators of Hebrew day schools. Educators were accessible and amenable

to phone conference; however, in some instances, the lack of in-person interviews may

have resulted in shorter discussions and loss of interpersonal connections that are

normally established in face-to-face interviews.

Demographics

A total of 21 educators from 13 schools participated in this study, with representation from four schools that service female students, four schools that service male students, and five schools that offer instruction in mixed-gender classrooms. One school that services students with disabilities was included in the study. I intentionally included schools with varied philosophies so that modern-Orthodox and ultra-Orthodox communities were both represented in this study. All participants had more than 5 years of experience working in Hebrew day schools, with 14 participants reporting more than 16 years of experience working with Hebrew-English dual language learners. Ten participants worked in modern-Orthodox Hebrew day schools and 11 participants worked in ultra-Orthodox Hebrew day schools. I gave each interviewee a number that corresponded to the order in which they were interviewed to maintain participants' confidentiality. All participants were female and educated children at the preschool level. Table 1 indicates the demographic data of the participants, as well as students' gender, Orthodox religious affiliation, and grade/age.

Table 1

Participant Demographics

Participant code	Participant gender	Higher education major	Grade/age serving	Years serving in Hebrew day school	Student gender	Orthodox religious affiliation
PC1	F	Early Childhood	N-P1a	16+	M/F	Modern
T6	F	Early Childhood	K/4-5	6-10	M/F	Modern
T16	F	Education	K/4-5	16+	F	Ultra
T3	F	Education	P1a/5-6	16+	F	Ultra
T21	F	School Psychology	P1a/5-6	6-10	M	Modern
T7	F	Education/Special Education	K/4-5	16+	M/F	Modern
T18	F	Special Education	K/4-5	16+	M/F	Modern
T12	F	Special Education	P1a/5-6	6-10	F	Modern
T14	F	Education	P1a/5-6	16+	F	Ultra
T4	F	Special Education	P1a/5-6	16+	M	Modern
T19	F	Special Education	P1a/5-6	10-15	M	Ultra
PC5	F	Education	N-P1a	6-10	M/F	Modern
PC15	F	Early Childhood	N-P1a	16+	M/F	Modern
PC11	F	Education	N-8	16+	M	Ultra
PC13	F	Education	N-8	16+	F	Ultra
PC10	F	Education	N-P1a	16+	F	Ultra
PC8	F	Special Education	P1a/5-6	16+	M	Ultra
PC9	F	School Psychology	N-P1a	6-10	M	Ultra
PC17	F	Education	N-P1a	10-15	M/F	Modern

Note: PC = preschool coordinators; T = preschool teachers; N = nursery; K = Kindergarten; P1a = pre-1-a; F = Female; M = Male

Data Collection

Qualitative research allows a researcher to study how people perceive their reality by focusing on the rich context of their individual settings (Yin, 2016). By interviewing participants, the qualitative researcher can compile data that describe and interpret real-life experiences. I created an interview protocol of five semistructured interview questions that provided guidance to answer the research questions of this study.

Twelve teachers and nine preschool coordinators/administrators participated in a one-time interview. Interviews ranged from approximately 30 to 60 minutes in length. These interviews were conducted by telephone. The duration of the interview depended on how forthcoming the participant was and to what extent the participant elaborated on their perceptions regarding simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools. In some instances, the phone interview may have limited the relationship and social connection that might have extended the length of the interview. I endeavored to conform to the interview length that was projected in the consent form; however, some participants required more time than was originally allotted to express their thoughts, and others were brief in their responses regarding their perceptions of teaching Hebrew and English literacy to early heritage language learners.

I digitally recorded each interview and backed-up the recording on a laptop computer that is password protected to ensure no data would be accidentally lost during the process of transcribing the interviews. I took handwritten notes during each interview

to bracket my personal thoughts and biases and to record context clues that would enhance the coding and analysis of the data. I manually transcribed each interview in a timely manner within a few weeks to ensure I remembered the nuances of the conversations. Once I completed the interviews, I copied the digital recordings to a laptop computer, which I then transferred to a USB device. I will keep this USB securely locked in a file cabinet 5 years, as required by Walden University. After I completed the data analysis, I confirmed the findings of the study by member checking the themes that emerged from the data. By means of a 15-minute telephone conference call with each participant, I was able to ensure the accuracy of the data collected during the interviews and review the findings to increase the trustworthiness of this study. I also mailed a two-page summary that encapsulated the findings to the participants via the USPS.

Interview Process

I used a public telephone directory to contact Hebrew day schools in a city in the Northeastern United States that is heavily populated by Jewish residents. Because of state-wide school closures brought about by COVID-19, I left messages on voicemail systems. When my call was returned by administrators, I explained the reason for the call, detailed the purpose of the study, and requested that the coordinator provide contact information for educators who might be interested in participating in this study. I asked for contact information for preschool teachers with a minimum of 5 years of experience teaching Hebrew and English to early heritage language learners. I then called those teachers to request their participation in this study. During that phone call I explained the procedures, shared sample questions, and assured them of confidentiality standards. I also

reviewed the risks and advantages of participating in the study and the procedures for securing the data. Those participants who were interested in joining the study and had e-mail addresses and computer access at home received the questionnaire (Appendix B and Appendix C) and consent form via e-mail. I adhered to the data collection process outlined in Chapter 3, making exceptions only because of the unusual circumstances that resulted because of school closures that necessitated educators to be self-quarantined. In the Orthodox Jewish community, computers and scanners may not be in every home because of the sheltered nature of the community. As such, I acquired documentation in person by driving to the participants' homes to obtain consent form signatures and questionnaire responses.

Preschool teachers and administrators were not bound by their normally involved schedules because of the state-mandated school closures, and I easily arranged interviews. In one case it was necessary for a participant to cancel participation because of a death in the family. In a second case the participant rescheduled our interview because a family member took ill. At the beginning of each interview, I briefly reviewed the purpose of the study and reiterated that the participant had the right to withdraw from the study at any time. I offered the opportunity for the interviewee to ask any questions and reminded the teacher/preschool coordinator that our interview was being recorded. I assured the participant identity would be kept confidential and that data would be presented only in aggregate form without any identifiers included in the published dissertation or two-page summary that would be shared with participants.

The semistructured interviews took place over the phone and were recorded on a digital recorder to allow for transcription. I also took handwritten notes during the course of the interviews. After each interview I backed up the recording on a password protected laptop computer to ensure the interview was not inadvertently deleted whereby data would be lost. After I personally transcribed each interview, I deleted the interview from the digital recorder and transferred the transcription from the laptop computer to a new USB drive that is protected in a locked fire-safe cabinet where it is stored, together with the transcripts and journal notes, for 5 years as required by Walden University. After 5 years, I will dispose of the data by shredding the paper files that contain journal notes and participants' contact information and destroy the USB drive.

Data Analysis

Research questions that frame a study are answered by analyzing the data that are collected (Yin, 2016). Data must be gathered and systematically arranged for the purpose of interpreting results and drawing conclusions (Bengtsson, 2016). An organized process must be used for the analysis of qualitative information so that the data lead to results that are meaningful, worthwhile, and transferrable (Ravitch & Carl, 2016).

Data collection comprised of 21 semistructured interviews that I transcribed into approximately 275 pages of typed data. I also wrote approximately 21 pages of handwritten journal notes during the interviews. I used bracketing to address proactively any issues of bias and selectivity (see Yin, 2016). Yin suggested a recursive five-step research model that includes compiling, disassembling, reassembling, interpreting, and concluding in order to analyze data deductively. The first step was to (a) review the

interview transcripts by reading them numerous times, (b) apply open coding and pattern

coding followed by the creation of categories, (c) classify categories by importance and

assign each category a label, (d) read the data a second time for the purpose of

determining the labels in order of importance, (e) find supporting data for each category

while identifying possible discrepant cases, (f) read the data a third time to ensure that

categories aligned with emergent concepts, (g) establish themes based on the categories,

and (h) develop an outline that indicated how categories developed into themes. I used

quotes from the participants to authenticate the conclusions that were offered in the

results section of this research.

Coding Strategy

Qualitative researchers are required to analyze data while collecting and

compiling information from participants (Yin, 2016). I used semistructured interviews to

extend the conversation by asking additional probing questions in response to

participants' answers for the purpose of revealing deeper perceptions and increasing

understanding (see Bengtsson, 2016). Bracketing is a strategy that helps researchers

address possible bias as data are analyzed. Sweller's (1988) CLT provided a frame of

reference as I read, reread, and copiously highlighted the transcripts. I used highlighters

to color-code opinions, thoughts, and expressions in order to inductively create and

prioritize important concepts that were shared by the participants.

Open coding. I codified the data by identifying common words and phrases

relating to the sequence of instruction of Hebrew and English orthographies that I found

in the transcripts (see Table 2). In the column to the left, I noted whether the participant

was a preschool teacher or coordinator. In the middle column I included a quote

excerpted from the interview, and in the column to the right I labeled the open codes. The

coded and categorized data that resulted from these interviews helped identify teachers'

and preschool coordinators' perceptions of effective instructional practices of

bidirectional Hebrew and English literacy to early heritage language learners in Hebrew

day schools in a heavily populated city in the Northeastern United States. This process is

exemplified in Table 2, *Sample Open Coding for Teachers and Preschool Coordinators*. I

developed codes by closely reading the interview transcripts and highlighting words and

phrases that often repeated. By identifying recurrent thoughts and ideas expressed by the

participants I was able to begin to undertake the task of exploring educators' perceptions

of effective bidirectional Hebrew-English literacy instruction to early heritage language

learners.

Table 2

Sample Open Coding for Teachers and Preschool Coordinators

Participant group	Interview text excerpt	Open codes
Teacher	There's a Board that runs to the Administration. Then the higher ups are told…to tell the teachers to change things	Academic expectations
Preschool Coordinator	The school would like them to be on Level D	
Teacher	Parents don't realize that it's harder this way	Parental expectations
Preschool Coordinator	Parents wanted more…educating parents in this may be a good approach to the issue.	
Teacher	When a child is older and more mature in the classroom setting it gets easier for him	Maturity/Developmental readiness
Preschool Coordinator	I realized it was better if I waited a little bit longer. Developmentally, the longer [in the school year that] I waited…the more the kids could catch on	
Teacher	For the children who can handle two languages at once, or reading in general… [simultaneous instruction] is not such a problem	Determining sequence of instruction
Preschool Coordinator	Hebrew and English, instead of avoiding it, let's tackle it	

An initial review of the transcripts indicated that the majority of participants used a simultaneous approach to teaching Hebrew and English orthographies to early heritage language learners. Simultaneous early Hebrew and English instruction was implemented in eight of 13 schools while five schools used a sequential approach. Participants revealed their perceptions regarding the reasons that a particular sequence of instruction was implemented, including (a) cultural philosophy, (b) parental pressure, (c) competition, (d) Common Core Standards, (e) practical staffing considerations, (f) expectations of elementary school teachers and principals, (g) educational precedents, and (h) Universal Pre-K requirements. Additionally, teachers' perceptions of external factors that influence biliteracy acquisition were significant. Teachers and preschool coordinators identified sequence of instruction coupled with (a) students' maturity/developmental level, (b) class size, (c) physical classroom size and arrangement, (d) teacher:student ratio, (e) support staff, (f) differentiated and modified instructional strategies, (g) internet/gaming exposure, (h) teacher training, (i) assessment, (j) instructional grouping, and (k) student demographics, as fundamental to biliteracy early Hebrew-English acquisition. Finally, I identified teachers' perceptions of specific challenges related to teaching Hebrew and English alphabetic codes, both sequentially and simultaneously.

Pattern coding. Using the first cycle of open codes as a springboard, I continued to code data using vocabulary to identify patterns. Open coding is indicated in the left column of Table 3. Sub-categories are noted in the middle column, and categories are listed to the far right. Table 3, *Open Coding to Axial Categories*, evidences the progression that was followed. This second coding cycle led to the creation of sub-

categories and categories. The open codes of (a) cultural philosophy, (b) parental pressure, (c) competition, (d) Common Core Standards, (e) practical staffing considerations, (f) requirements of elementary school teachers and principals, (g) educational precedents, and (h) Universal Pre-K curriculum were grouped into the sub-categories of academic requirements, expectations of others, and community norms. These sub-categories were then joined to create the category of school's selection of Hebrew-English instructional sequence.

To effectively complete the second coding cycle, I reread the interview transcripts and journal entries. I also reviewed notes that were written in the margins as I highlighted quotations during the first coding cycle. As I retitled labels based on the patterns located in the open codes, I continued to look for data that would further support the coding process (see Table 3).

Table 3

Open Codes to Pattern Codes

Open codes	Sub-categories	Categories
▪ Determining sequence of instruction ▪ Cultural philosophy ▪ Academic expectations ▪ Parental pressure ▪ Competition between schools ▪ UP-K guidelines ▪ Common Core State Standards in first grade ▪ First grade teacher/principal expectations	The school's religious orientation, parent body, and community influences the choice of literacy sequence Elementary school principals, teachers, and Common Core State Standards are a source of pressure to accelerate students' reading	External factors that influence determination of biliteracy sequence
▪ Simultaneous teaching of bidirectional codes ▪ Sequential teaching of bidirectional codes ▪ Instructional practices ▪ Maturity/developmental level ▪ Classroom environment ▪ Student grouping ▪ Staffing, scheduling, and training of teachers	Methods of teaching biliteracy should align with sequence of instruction Teachers and reading specialists must be trained to understand the challenges of the bidirectional reading process	Instructional practices, maturity, and classroom environment influence biliteracy acquisition

Pattern coding showed similarities between the open codes, which resulted in sub-categories and categories. Coding all 21 interviews allowed the essence of the data to be merged and related so that the participants' perceptions were categorized and themes were able to be extrapolated. There were no responses that produced discrepant data despite the fact that only one school serviced children with special learning needs.

Pattern coding revealed that educators' perceptions of the effectiveness of bidirectional literacy acquisition largely differed according to the sequence of instruction being offered in their educational setting. Among the seven teachers who teach Hebrew and English reading simultaneously, two teachers perceived the sequence as effective, four teachers perceived the sequence as ineffective, and one teacher reported no opinion. Among the six preschool coordinators that administer programs where Hebrew and English reading are taught simultaneously, four coordinators perceived the curriculum as effective and two coordinators perceived the curriculum as ineffective. All teachers and preschool coordinators working in the five schools where Hebrew and English reading are taught sequentially perceived this sequence as being effective (see Table 4).

Table 4

Participants' Perceptions of Curriculum Design

Sequence of design	Number of participants	Participants' perceptions	Frequency	Percent
Coordinators simultaneous	5	Effective	2	40%
		Ineffective	3	60%
Teachers simultaneous	7	Effective	2	29%
		Ineffective	4	58%
		No Opinion	1	14%
Coordinators sequential	4	Effective	4	100%
		Ineffective	0	0%
Teachers sequential	5	Effective	5	100%
		Ineffective	0	0%

Among the schools that teach Hebrew and English sequentially, two schools introduce Hebrew reading first and teach English reading only when the Hebrew reading has been mastered, while the other two schools introduce English reading first and teach Hebrew reading only after English reading has been mastered. Pattern coding revealed common underlying reasons for the decision to teach either simultaneously or sequentially. Reasons included social pressure, academic competition, UPK/Common Core requirements, and practical staffing needs. These open codes were grouped in into a subcategory labeled external factors that determine literacy sequence.

Analyzing the pattern codes further revealed similarities in the support systems implemented by school administrators to reinforce and sustain simultaneous literacy curriculums. Schools segregated by gender, as well as mixed-gender classrooms,

included support such as modified instruction and reading specialists for struggling students, mandatory summer literacy assignments, and extended literacy instruction through Grade 6 for all students. Coding also revealed that all participants, regardless of the sequence of instruction implemented in their school, perceived that multi-modal teaching and frequent, continuous assessments are vital components of biliteracy instruction.

Repeated words and phrases were analyzed using the cycle of open and pattern coding in order to identify sub-categories and categories and gain an understanding of participants' perceptions. During pattern coding, issues that were discussed in Chapter 2 relating to biliteracy instruction, including the benefits of early exposure to both languages (Chan & Sylva, 2015), the importance of developmental readiness (Lallier & Carreiras, 2018), and the high incidence of reading issues relating to directionality (Lopez-Velazquez & Garcia, 2017) emerged and were categorized.

Emergent Themes

A cyclical process was used to code, analyze, and interpret the data collected through semistructured interviews. The purpose of synthesizing the data was to reveal teachers' perceptions of effective literacy sequence when teaching early heritage language learners bidirectional Hebrew and English orthographies. The interviews were read and reread, open-coded and labeled. Pattern coding then led to the formation of categories. Categories were then grouped into themes that were merged into themes related to the original research questions. The perceptions of teachers and preschool coordinators were analyzed separately and together. Themes were analyzed for

similarities and differences when teaching Hebrew and English sequentially and simultaneously. Four themes emerged: (a) school administration chooses a specific sequence of instruction based on cultural philosophy, external expectations, and practical considerations; (b) bidirectional reading acquisition is influenced by instructional methodology, class dynamics, and staffing; (c) advantages and disadvantages exist for both sequential and simultaneous early literacy instruction; and (d) simultaneous Hebrew-English instruction requires strong, focused support to be effective. Table 5 exhibits these four themes.

Table 5

Categories to Themes

Categories	Themes
External factors that influence the determination of biliteracy sequence	School administration chooses a specific sequence of instruction based on cultural philosophy and external expectations
Instructional practices, student and teacher demographics	Bidirectional reading acquisition is influenced by instructional practices specific to Hebrew-English orthographies, developmental maturity, and staffing
Pros and cons of introducing Hebrew and English sequentially or simultaneously	Advantages and disadvantages exist for both sequential and simultaneous early literacy instruction
Extra literacy support for struggling students, continuous assessments, summer follow-up	Simultaneous Hebrew-English literacy instruction requires strong, focused support to be effective

Thematic analysis helped organize and align the data collected from preschool teachers and coordinators in Hebrew day schools. Open codes and pattern codes were developed into categories and themes. These thematic units are discussed in the following section.

Discrepant Cases

Discrepant data are information that rivals data provided by participants in a study (Yin, 2016). Participants reported and discussed the advantages and disadvantages of the instructional methodology that is currently implemented in their programs. The collected data revealed the philosophy for choosing a specific sequence, external factors which lead to the program's effectiveness, teachers' perceptions of effective literacy sequence, and strategies for support of simultaneous literacy instruction. After I examined the data, I found no discrepant data that conflicted with the emerging themes.

Results

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. Semistructured interviews of preschool teachers and preschool coordinators were conducted to collect data for the purpose of answering the following research questions:

Research Questions

The research questions for this study were as follows:

RQ1: How do preschool educators perceive simultaneous instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ2: How do preschool educators perceive sequential instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ3: How do preschool educators perceive the effectiveness of teachers' simultaneous instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

RQ4: How do preschool educators perceive the effectiveness of teachers' sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

Five open-ended questions that guided pre-school teachers' semistructured interviews were: (a) What sequence of Hebrew-English literacy instruction do you currently use in your classroom?; (b) What strengths and weaknesses do you perceive in the sequence of Hebrew-English that is currently implemented with your students?; (c) Please describe some of the activities included in your literacy instruction: (d) What role do you, as the teacher, play in determining the sequence and assessment of biliteracy instruction?; and, (e) What is your personal philosophy regarding the sequence of teaching Hebrew and English reading to English-speaking emergent literacy learners? Participant responses were coded, categorized, and synthesized into themes.

Four themes emerged from preschool teachers and administrators and are presented in Table 4. The themes that emerged showed that (a) school administration

chooses a specific sequence of instruction based on cultural philosophy and external considerations; (b) bidirectional reading acquisition is influenced by instructional practices, class dynamics, and staffing; (c) advantages and disadvantages exist for both sequential and simultaneous early literacy instruction; and (d) simultaneous Hebrew-English instruction requires strong, focused support to be effective.

Theme 1

Theme 1 was that the school administration chooses a specific sequence of instruction based on cultural philosophy and external expectations. All 12 teachers and nine preschool coordinators interviewed for this study reported that school administration, and not teachers, decided on the sequence of early literacy instruction to be implemented in these Hebrew day school preschool classrooms. Interview responses indicated participants perceived that cultural philosophy and external factors are components in biliteracy curriculum design. Carreira (2004) stated that the effectiveness of instructional design has been determined to be important for heritage language learners who speak English as a first language and learn a language other than English for cultural reasons.

Cultural philosophy. In total, eight of the 13 schools included in this study utilized a simultaneous approach, and five of the 13 schools included in this study implemented sequential teaching of Hebrew and English. Cultural considerations were expressed mostly by educators who teach sequentially while external expectations were perceived as the impetus for instructional design by educators teaching both languages simultaneously.

English-Hebrew model. Three of the five modern-Orthodox Hebrew day schools that were included in the study teach sequentially, and all three schools teach the English alphabet first. Preschool Coordinator (PC) 8 stated that teaching English first in a sequential program aligns with the modern Orthodox cultural philosophy that attempts to synthesize Jewish values with the secular world. PC5, who works in a modern-Orthodox school that mandates English first, added to this premise by agreeing that "their mother tongue is the most important" but also noted that English was chosen first because English is "what they can learn easily, that's what they're familiar with."

Hebrew-English model. Two of the ultra-Orthodox schools included in this study teach Hebrew first in the sequential model, and do so, as expressed by Teacher (T) 3, because "Aleph-Bais is really supposed to be the more important lesson." T2 however, believed that Hebrew should be taught first, not only because it is culturally mandated, but also because it is a more phonetic language and would be a good background for future literacy acquisition. PC1 agreed that cultural and philosophical factors influence the choice of sequence, and noted another reason and explained:

> It makes it easier to learn Hebrew first, without the English, because it's consistent in Hebrew. A letter with a sound under it always makes the same sound. In English a "b" followed by an "e" can have different sounds. Once they have it solid, the concept of sounds of the letters, then they can understand vowels, and that vowels have different sounds.

The perceptions of T2 and PC1 aligned with a study conducted by Schmalz et al., (2015) that posited that deeper orthographies require greater effort to learn. According to

this perspective, Hebrew would be taught first because it is a shallow orthography with more consistent phonetic rules.

External expectations. Heritage language learners have specific learning requisites that must be met through an instructional design that is tailored to meet their needs (Chan & Sylva, 2015). External factors, however, were perceived by participants to be an important component in determining the sequence of biliteracy instruction. Both teachers and coordinators expressed their perceptions that parental expectations, competition, and curriculum benchmarks mandated by the state contributed, at least in part, to curriculum design.

Parental expectations. External expectations refer to outside factors, such as social dynamics and competition, which may influence curriculum design. Included in external influences are parental expectations as expressed by T1, "This is what parents expected and what parents wanted." T4 stated, "As time went on everyone wanted more, parents wanted more" and T1 agreed and added, "It made us look like we were doing a very good job, learning both Hebrew and English by Pre-1-a. But parents don't recognize that it's harder this way." PC17, who disagreed with the mandated simultaneous design in her school, perceived that the parent body was instrumental in determining the curriculum. "They would come into our Nursery thinking, what are they doing in Nursery, just playing? They're not learning letters and numbers?" Although the coordinator noted similar comments have somewhat diminished over time, PC17 perceived parental expectations as an important external factor.

Social competition. Competition between private schools was also perceived to be a contributing factor in curriculum design. T7 expressed this feeling well, "[A teacher] could teach in 2 months in first grade what you learn a whole year [in Pre-1-a] but he has no choice because everybody's doing it like that, teaching reading in Pre-1-a." T14 concurred, "there is also competition between schools of where everyone is up to. I would also put that into the equation. Everyone is starting everything so much younger because they're so nervous." PC8, a respected educational evaluator in the community, agreed:

> The rush to teach English early comes from academic pressure, from parents, from schools, to be the best, top, most advanced . . . I think they're worried that if they learn it a year later then people won't value their academics . . . I would say about 25-30% of the children are having difficulties [reading]."

Universal pre-K. Another external factor affecting the choice of the sequence of reading instruction is the prevalence of universal pre-K (UP-K), a state-funded early childhood program that services 4-year-old children. Five of the 13 schools that participated in this study have UP-K programs and adhere to the mandatory UP-K curriculum guidelines. Each of these five schools implemented a simultaneous model of biliteracy instruction.

UP-K curriculum guidelines do not allow direct instruction of the alphabet. PC15 noted that under UP-K regulations, "it's not necessary for them [the children] to know the letters," and T7 similarly reported that UP-K "does not allow direct teaching of any alphabetic letters in their curriculum….[UP-K guidelines] are not interested in us doing

's' sheets, cutting out everything that starts with an 's.'" Public schools introduce the ABC and basic decoding skills to 5-year-old children during the school year following UP-K, and build upon those skills in first grade. UP-K benchmarks were not created specifically for early heritage language learners in Hebrew day schools who require instruction in two alphabetic codes. Participants at each of the five schools including UP-K curriculum standards in their schools perceived that Hebrew day school administrators take this external consideration into account when designing the sequence of biliteracy instruction.

Expectations of elementary school principals and teachers. Another external factor that may influence dual literacy curriculum design in Hebrew day schools was reported to be the expectations of principals and teachers when the students attend first grade. Especially in Hebrew day schools using dual curriculums, there is the concern that the Hebrew and English teachers in first grade will encounter students who evidence a lack of literacy proficiency, in one or both languages, after completing preschool. PC17 noted that "every teacher of the upcoming year would say that the previous teacher didn't teach them anything."

An external consideration that influenced the expectations of elementary school principals and teachers was the introduction of the Common Core State Standards. As stated by T14, who teaches 5-year-olds in Pre-1-a, "At this point it has changed to Common Core and it is a lot more extensive and the expectations are much higher…it's not pre-reading anymore."

First grade materials and textbooks conform to these state standards and first grade students are expected to have mastered basic English reading skills by the beginning of the school year. Preschool teachers and coordinators are therefore pressured by the elementary school teachers and principals to meet this expectation and read English by the end of Pre-1-a. As noted by T4 "the curriculum from first grade and on changed…in first grade they expected them to be reading." PC15 complained that "Two years after Common Core came…we were told in kindergarten that all children have to come into first grade reading on Level D [a reading level at which students can read simple fiction and non-fiction texts without pointing]. The next year we were all very nervous." PC5 concurred, "They're so stressed about what the next year's teacher will say."

The perception of the participants was that the sequence of Hebrew-English biliteracy instruction is often influenced by Common Core State Standards. However, these benchmarks were determined for single-language English literacy learners. Son (2017) posited that heritage and non-heritage learners should be introduced to literacy differently because literacy instruction should be targeted to the individual needs of the biliterate students.

Theme 2

Theme 2 was that bidirectional reading acquisition is influenced by instructional practices, staffing, and environment. Schools that implemented a sequential introduction of Hebrew and English orthographies faced challenges similar to those that all teachers face when teaching early literacy learners. Class size, ratio of teachers to students,

grouping, and methods of assessment are important considerations for all effective literacy instruction but are not the focus of this study. Bidirectional literacy instruction, however, requires a specialized approach when presented simultaneously. Educators shared different perspectives on the most effective instructional practices when teaching Hebrew and English simultaneously.

Instructional practices. Hebrew reading differs significantly from English reading. The most obvious difference is that English is read from left to right, and Hebrew is read from right to left. Furthermore, the English orthography is linear, with consonants and vowels following one another, and Hebrew requires both horizontal and vertical tracking because the vowels are usually placed either below or above the letter. This configuration thus requires specialized instruction. T2 elaborated:

> The vowels [in Hebrew] are underneath the consonants, mostly. Sometimes they are next to the consonants but most of the time they are right under the consonants. And as the children learn, they basically learn, let's say they learn one vowel. They learn how to blend that vowel with every single consonant of the Hebrew alphabet. And they practice with that and then they learn the next vowel.

Although Hebrew and English orthographies have many differences, instructional practices for early literacy instruction included similar practices when teaching any language. Phonemic awareness, letter-sound association, multi-modal activities, vocabulary, and writing instruction were all included when teaching both Hebrew and English.

Introduction to the letters of the alphabet, however, varied. All participants, without exception, taught the Hebrew Aleph-Bais in order of the alphabet; the English alphabet was not always introduced in sequence. Depending on the program, for example, the English alphabet could be introduced based on letter shape or frequency of usage. The Aleph-Bais was taught at the rate of one letter per week; the rate at which the English alphabet was introduced varied from one to three letters a week. Another notable difference between Hebrew and English early literacy instruction was the focus on English sight words, which are less common in Hebrew because of the phonetic nature of the orthography.

Associating Hebrew letters with English words was seen as an advantage by some preschool teachers concerned about teaching Hebrew to English-speaking children who lacked a solid Hebrew vocabulary. While most participants perceived associating the Hebrew letter 'vav' with a 'vacuum cleaner' to be confusing, others, such as PC9 embraced the association between both alphabetic codes. PC13 went so far as to say they encourage children to interchange the sounds and characters of the Hebrew and English alphabet, saying that "we transliterate all the time. They write letters to their mothers and teachers and they enjoy it because (it's) so phonetic."

Another significant instructional practice that differed between schools included the timeframe in which the dual alphabetic codes were introduced within the preschool year. T6 noted that even a few months make a noticeable difference in developmental maturity when working with 4-year-olds. While most participants in simultaneous programs introduced both alphabets beginning in September, some teachers delayed

direct reading instruction by a few months. PC5 said that "when children are playing there is a tremendous amount of learning that is going on and I see healthy growth…I'd love to see more of that." PC5 is planning to start teaching the English alphabetic code in January, instead of September, of this kindergarten year, and explained:

> I just don't mind pushing it [alphabetic instruction] to the second half of the year. I find that when the children are a little bit older, I find that to be more productive. I would much rather in the first half of the year if they would concentrate on the language and actually learning [language] through play.

> T18 agreed and shared that teaching the alphabet was delayed at the beginning of the kindergarten school year. "I wanted all the children to learn, how to live in the community. Once you start pushing [reading] there's no time to play…to get to know each other."

> T14 differentiated instruction for children having difficulty with letter-sound association of both languages at the beginning of the school year. The teacher taught only one alphabetic code to these children until the middle of the year, and then introduced the second alphabet slowly. PC8 concurred that some students are not developmentally ready to learn both alphabetic codes and found it helpful to focus on one of the alphabet codes before introducing the second alphabet.

Staffing and scheduling. Teachers are pivotal to the success of any classroom (Balkar, 2015). Hiring, scheduling, and training of teachers charged with simultaneous Hebrew-English instruction was thus of paramount importance. Most participants reported providing Hebrew instruction for half of the school day, and English for the

other half of the day, with lunchtime as the separator between the two languages. One teacher instructs the children in the morning in one language, and another educator teaches the other language in the afternoon. Four of five schools that implemented sequential teaching of Hebrew and English followed this model. Seven of eight schools with a simultaneous Hebrew-English instructional design followed this model, as well. PC13 stated that "It's a plus that they have two different teachers…different teachers, different times, different space." In PC13's opinion this distinction is integral to simultaneous teaching of dual orthographies.

Two preschool coordinators, however, hired one teacher for both Hebrew and English instruction. Each coordinator noted the advantage of having one educator teach both Hebrew and English orthographies. PC10 observed that "[one teacher] knows them best…it's easier to ascertain what their [the children's] needs may be." PC9 also saw the advantage of the same co-teachers responsible for biliteracy instruction as "it just alternates throughout the day."

PC8 commented on the need for teachers to be trained to teach biliteracy because "they need a different style of teaching . . . they need training in both [languages]." To address this problem, T6 believed that every Hebrew-English biliteracy classroom should be staffed with one teacher who speaks English as a first language and a second teacher who speaks Hebrew as a first language. PC15 noted that teachers need more literacy blocks of time if they are to successfully teach two orthographies, while also wishing that "every teacher [be given] a course specific to their grade level."

Environment. In early childhood classrooms, walls are decorated with signage meant to promote literacy. Heritage language learners require an educational environment that portrays their dual reality (Creese & Blackledge, 2011). The classroom décor was reported to differ dramatically between classrooms, reflecting the philosophy that serves as the foundation for instructional sequence. Some schools, such as the one in which P14 works, integrated posters and students' work without regard to Hebrew or English orthography. Others segregated artifacts by language, and designated separate walls for Hebrew and English alphabet charts and posters. T21 noted that in the classroom, walls are divided horizontally, with Hebrew displays on top and English posters on the bottom. Teachers who followed a sequential curriculum labeled objects using the alphabetic letters of the language being taught. Five of eight teachers who followed a simultaneous curriculum, labeled children's shelves and toys in both Hebrew and English. Three teachers who disagreed with the simultaneous model used only one alphabet to identify classroom objects.

T18 reported the Pre-1-a class shares two teachers in two adjoining classrooms. Half the class has English instruction in the morning while the other half learns Hebrew, and the classes switch rooms and teachers after lunchtime. Each classroom is completely decorated in the language of instruction and only the language of instruction is permitted to be spoken during that time period. T16 reported separate areas of the classroom designated for teaching Hebrew and English for the purpose of creating a distinction in the children's minds between the two orthographies.

Theme 3

Theme 3 was that preschool educators perceive that advantages and disadvantages exist for both sequential and simultaneous early literacy instruction. Researchers differ in their approach to effective sequence of instruction for biliterate students (Berens et al., 2013). Findings from various studies, including those conducted by Valenzuela (2017), Brannon (2019), and (Rosowsky, 2019) recognize the advantages of biliteracy instruction. Other researchers (Agheshteh, 2015; Ahmadi & Mohammadi, 2019; Velasco & Fialais, 2018) contend that sequential instruction is more effective. This study revealed that more teachers perceived the benefits of sequential instruction as opposed to simultaneous instruction.

Perceptions of educators who support simultaneous instruction. Eight schools, of the 13 schools included in this study, introduce early literacy simultaneously. Only two teachers and two preschool coordinators, four in total, were advocates for simultaneous instruction. T10 emphatically believes that:

> Strengthening pathways and making more connections…the mind is elastic. The mind can absorb anything. It it's done with thought, clarity in ways that the child can connect to it and put it in its right place, then I think a child can do it…if social-emotional intelligence is in place, academics will kick in.

T10 acknowledged that a child may be confused by the simultaneous approach but believes that "we have to teach children how to fail, how to maintain their self-esteem when they don't succeed."

PC13 approved of the simultaneous model. "I believe that touching on something early on, even when some may not be 100% ready for it, and then constantly reviewing, tons of review, it works." PC13 continued:

> If we wait until we finish one thing, and then we're going to start the next thing, the first thing gets a lot of review, the second thing gets less review because we started later. Then you're up to the next thing already. So, I would prefer starting early in most cases and spending the full amount of time on both so that we get the maximum amount of review.

T20 stated that there are no problems with teaching simultaneously. "The one or two children that had a problem and couldn't pick up the Hebrew language, couldn't pick up the English language either. It has nothing to do with the speed that you're going." T20 acknowledged that directionality can be an issue and addressed this problem by stating "they [the children] are very confused with directions. Like the Hebrew is going from right to left and the English is going, you know, from left to right. So, we have to teach that."

T19 noted that it is assumed that 5-year-olds will learn the Hebrew alphabet. T19 saw an advantage to also teaching English at this young age because the multi-modal approach is easier to include before the children enter elementary school. "I have the ability to do creative stuff, we do a lot of physical things with the letters [that we wouldn't be able to do in first grade]. We jump…we dance…we play musical chairs with the letters. It's a relaxed introduction."

Perceptions of educators who do not support simultaneous introduction.

Approximately 58% of the participants who implement a simultaneous design oppose their school's early literacy curriculum. T2 felt that "children do better when they master one language at a time." PC15 agreed, "There's only so much that the mind can accept. We were teaching the Aleph-Bet at the same time as the ABCs but we realized that it was not a great thing…We found that were not being very successful." Teachers perceived that students who would succeed at one language failed when being introduced simultaneously to two orthographies, as noted by T4, "If they had just one language, they would be able to perfect each language. Now we're doing a little of this and a little of that."

Other participants reasoned that teachers allocate too much time to academics when preschoolers need direct instruction in social and emotional domains. T3 teaches simultaneously, but vehemently disagreed with the approach mandated by the administration of the school and stated:

> Learning Aleph-Bais . . . is so exciting. You take away some of this joy by shoving in ABCs in the afternoon . . . If you're also teaching them ABCs, they're going to be immediately drawn to that first. Because that's the easier one, they recognize it. They're learning how to write, they're pressuring them to write, but they're not even holding the pencil correctly, they're not cutting correctly . . . because the focus is so much on the academia. Skills that are necessary for life are not being taught as much in kindergarten because they're spending too much time on the academic angle.

PC1 coordinates a preschool that utilizes a simultaneous approach and disagrees that the immediate outcomes validate the sequence:

> To me enjoying the reading is what's important because the reading they will get, but they won't enjoy it because it's a struggle to learn it. There are those that will struggle for years. Five-year-olds are just not ready [for simultaneous Hebrew-English instruction]. It's not the way people think, that preschool children . . . can do it all.

T7 commented that it is very hard to do both intensively. "If we don't try to do a million things…I feel like we connect to the kids so much better." This teacher continued, "we're so pressured, okay, we got to do the next thing, we got to do the next thing. There are so many things we have to accomplish." T7 felt that children need more of "the emotional connection, the social connection. We're making more anxiety."

PC8 is also an educational evaluator and believed that the "stress of failure contributes so greatly to the reading process" and further noted:

> For some children it's just overwhelming, it's two different alphabets from two different sides. Just having to remember it, it's just a lot. They're learning a lot, the upper-case ABCs and lower-case ABCs, Hebrew print and script…and they have to learn to write all of this. Let them understand one language, then they can transfer that to the next language.

PC14 agreed and explained, "[We're] pushing everything so young . . . We're doing something that they are not ready for and we make it so hard that it becomes distasteful . . . a chore and very bad."

Perceptions of educators who support sequential instruction. All educators who work in schools where sequential instruction is implemented reported being satisfied with their approach. PC9 coordinates a preschool program that used a simultaneous approach until 2 years ago. PC9 stated:

The class was having a hard time learning Hebrew and English at the same time. They didn't have a strong foundation for either one. Some of the boys who were older or were brighter, didn't have such a problem. Overall, boys who struggled or were weaker academically couldn't pick up on both…40% weren't picking it up… [We see] a huge, huge change. They all come out of kindergarten knowing it [Hebrew] very well. They understand the concepts and are able to use that for English, it's not such a struggle. They're older [when they're introduced to English] and are able to handle it more.

When asked why the administration decided to teach Hebrew first, PC9 responded, "We're a religious school; there's an emphasis on learning Hebrew and Torah. Their obligation first is to learn how to pray...and then once they have that, they can go on to develop their English."

PC11 reported that they are pleased that the administration made the decision not to introduce the English alphabet in preschool at all. "English reading is harder than Hebrew because Hebrew is phonetic, and in English it's a combination of sight and phonetics. They're building on the fact that they're not confused in their minds with another language."

PC5 is preschool coordinator in a school where sequential instruction is perceived as working well. The children learn to read English when they are 4 years old and are introduced to the Hebrew alphabet when they are five. PC5 explained, "they achieved the skill – letter, letter sound, phonemic awareness. They [the children] are trained and ready to understand the concept when they start with the Aleph-Bet in Pre-1-a [5-year-olds]. Within 6 weeks they're already starting to read with *nekudot* [vowels]."

Perceptions of educators who do not support sequential instruction. All educators who work in schools where biliteracy Hebrew-English is sequentially introduced supported this sequence of instruction. In three of the schools that implement sequential instruction, children are taught English and then Hebrew, and in two of the schools the children are taught Hebrew and then English. Although educators perceived advantages of teaching either English or Hebrew first, none of the teachers or coordinators revealed any negative perceptions regarding teaching one orthographic code followed by a second code.

Theme 4

Theme 4 was that simultaneous Hebrew-English instruction requires strong, focused support to be effective. Twelve participants reported that their schools implement simultaneous instruction and shared the strategies used to support the teaching of Hebrew and English orthographies at the same time. Although many teachers, as noted above, disagreed with the sequence, they nonetheless reported putting considerable effort into ensuring their students' successful acquisition of two bidirectional alphabetic codes.

PC10 explained that it is important to offer direct instruction to help the children connect the two alphabets. The same teacher instructed both Hebrew and English in the same classroom. Children are taught to make connections between the sounds, "multiple modalities are included, visual, auditory… it resonates, [the children] can visualize it." Teachers use instructional strategies to help each child successfully learn and understand both Hebrew and English reading skills. "If it's done right, the child can connect to [each letter] and put it in its right place." T16 works with PC10 and agrees that although some students experience difficulty acquiring two alphabetic codes, teaching each alphabet while the children face two different physical directions, and having the alphabets displayed on two separate walls, helps the students distinguish between the two alphabets, and assists children to make connections between the sounds and letters of both orthographies.

PC13 took a different approach by addressing the confusion children experience learning Hebrew-English simultaneously. This preschool coordinator sees Hebrew as the harder language because the students have less context with the Hebrew language and speak English as a first language. The approach was to introduce the hardest subjects early on. "You have differentiation, different teachers, different times…different ways of tackling the different confusing things." PC13 hired additional reading teachers who specialize in Hebrew and English reading to frequently assess all students and work with those who are struggling. Mandatory summer homework is part of the literacy curriculum and importantly, direct instruction in both Hebrew and English literacy continues through Grade six.

T3 had a sufficient number of staff to create student reading groups within the classroom. By placing children in small group settings for reading instruction, teachers are able to focus on particular issues that arise with bidirectional literacy instruction, including issues with directionality. T3 noted that summer homework is mandatory and parents must send in logs of their child's work every 10 days. This teacher was required, by school policy, to call the parents if the work was not received and send rewards to students when the work was returned in a timely manner. Additionally, at the beginning of the next school year, "they [the children] backtrack in Hebrew and for the first months of the year they're still reviewing." This alleviates teachers' anxiety because the teacher knows that the material will be reviewed before new literacy skills are introduced. T3 appreciated that the preschool coordinator is proactive in addressing any potential deficits that may result from simultaneously teaching Hebrew and English to early literacy learners. T3 noted that the administrators in their program mandate a simultaneous literacy design, but "they have a plan in place. They have a lot of staff…mandatory summer [homework]…review for the first 3 months [of the next school year]. They're making an effort to make sure that this approach [simultaneous Hebrew-English] really works."

Discrepant Data

A study's validity may be compromised by discrepant data (Yin, 2016). Differences in participants' perceptions were not discrepant, but purposefully answered the research questions. Schools that service modern-Orthodox and ultra-Orthodox Jewish students, as well as schools that service only male students, only female students, and

mixed gender classes were included in this study. The responses revealed patterns endemic to culture and philosophy with noticeable similarities between school settings that shared ideology and demographics. I hand-coded responses which allowed me to thoroughly analyze the data and find data that conflicted with the emerging theme of the study. After I examined all the data, I found no discrepant data that conflicted with the emerging themes.

Evidence of Trustworthiness

Credibility builds the trustworthiness of a study (Yin, 2016) and truthfulness in data collection and analysis enhances this trustworthiness. The process by which the data were collected must be transparent and replicable, as it was in this study. Furthermore, to enhance trustworthiness a comprehensive and inclusive participant sample of 21 educators were included in the study. Trustworthiness and credibility are determined by the ability to independently confirm and transfer the resultant data to another study (Ravitch & Carl, 2016). Trustworthiness was confirmed by triangulating data, reflexive journaling, bracketing, and member checking, as outlined below.

Credibility

Credibility in this study refers to means by which the researcher can verify that the reported findings are true to the participants' perceptions (see Ravitch & Carl, 2016). The credibility of this study were established by interviewing both preschool teachers and preschool coordinators, thus triangulating data (see Patton, 1999). Variation was accomplished by interviewing 21 participants, 12 teachers and 9 coordinators, and examining the data that resulted. I enhanced the credibility of this study by using data

from interviews and journal notes. I minimized bias by consciously bracketing

throughout the interviews (Yin, 2016). Bracketing is the practice of setting aside

knowledge of previous research, preconceived beliefs, and biases (Yin, 2016). Bracketing

is used to address the possibility that the researcher's prior experiences were reflected in

the study's findings (Ravitch & Carl, 2016). Reflexive journaling by bracketing

throughout the interview process enabled me to identify predetermined notions and

consciously address any possible bias.

To further enhance credibility, the educators participated in a phone meeting after

the interviews were transcribed and analyzed. This process allowed the participants to

review the findings and ensure that the data were accurately understood, transcribed, and

the emerged themes reflected their perceptions (Ravitch & Carl, 2016). The goal of

member checking was to enhance the credibility of this study by ascertaining that I

correctly interpreted the information provided by the participants (see Saldaña, 2016).

Transferability

Thirteen Hebrew day schools in a heavily populated city in the United States

participated in this study. The transferability is limited because of the small sample size.

To the extent possible, transferability was extended by including both ultra-Orthodox and

modern-Orthodox educational settings, as well as a substantial and nearly equal

representation from male, female, and mixed gender classrooms. Semistructured

interviews allowed me to explore participants' perceptions.

Thick description, also known as detailed description (Rubin & Rubin, 2012)

increases research validity. Detailed descriptions enable others to recreate the findings

from a study and enhances transferability. In order to present prospective researchers'

opportunities to build upon these findings and replicate this study, I provided a thorough

description of the process, context, and participant perceptions in this report.

Reflective journaling enhanced the trustworthiness of this study. Bracketing

further enables the academic scholar to recognize any potential biases or predispositions

that may unintentionally distort the findings (Yin, 2016). Bracketing thus allowed the

researcher to identify predeterminations that may influence the final outcomes.

Transcribing notes, studying handwritten journal pages, and editing initial drafts of this

research allowed me to deliberately organize my thoughts and apply what was learned in

a nonjudgmental manner.

Dependability

Data were obtained from 21 participants in 13 educational settings. Perspectives

from both preschool teachers and preschool coordinators were obtained in order to

triangulate data (see Patton, 1999). By collecting data from multiple sources and

uncovering similarities and differences the dependability of this study was improved (see

Ravitch & Carl, 2016). A reflective journal also enhanced dependability and enabled me

to reliably and consistently report trends and compare data (see Yin, 2016). I also

employed bracketing, which reinforced dependability by safeguarding the impartial

nature of the reported data thus ensuring the stability of the data. Finally, by creating

audit trails I documented every phase of the research process. I also used audit trails to

document the coding process that resulted in sub-categories, categories, and themes.

Confirmability

Bracketing that was employed throughout the data collection process targeted the problem of potential bias during the interview process, as well as potential bias while open coding, pattern coding, and creating categories and themes. A rich, thick description also increased the confirmability of my study by decreasing the potential for bias (Yin, 2016). A detailed account of the participants' perceptions was incorporated by including actual quotes from the preschool teachers and coordinators which enriched the descriptive quality of the study. Further, data were appropriately and accurately collected, documented, analyzed, and presented to allow for other individuals to arrive at the same final determinations.

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Summary

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Chapter 4 includes the answers to the research questions, based on data, upon which this study is grounded. This chapter contains the analyses of the perceptions of preschool teachers and coordinators regarding early literacy instruction of Hebrew-English heritage language learners in Hebrew day schools. The themes deduced from the data were (a) school administration chooses a specific sequence of instruction based on cultural philosophy, external expectations, and practical considerations; (b) bidirectional reading acquisition is influenced by instructional practices, classroom environment, and staffing; (c) advantages and disadvantages exist for both sequential and simultaneous early literacy instruction; and (d) simultaneous Hebrew-English instruction requires strong, focused support to effective. Chapter 5 includes an analysis of the findings and discusses the relationship of the outcomes to the related literature.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. A qualitative exploratory case study design allowed me to obtain educators' feedback and insights via semistructured interviews. A case study design was appropriately used to address the gap in research about teaching early literacy to heritage language learners, a topic that was not previously well researched. Perceptions of teachers and preschool coordinators allowed insights into real-life phenomena that were inseparable from the context (see Ravitch & Carl, 2016). Descriptive narratives were collected from educators' actual experiences and not from theory (Rubin & Rubin, 2012). By reviewing the literature and analyzing the outcomes of the collected data, educators who design curricula for early heritage language learners may discover ways to improve the instructional methodology currently being implemented in bidirectional early literacy learning environments.

The themes that were synthesized from the participants' narratives revealed educators' perceptions of effective Hebrew-English bidirectional early literacy instruction. Support was found for the beliefs that (a) school administration chooses a specific sequence of instruction based on cultural philosophy and external considerations; (b) bidirectional reading acquisition is influenced by instructional practices, staffing, and environment; (c) advantages and disadvantages exist for both sequential and

simultaneous early literacy instruction; and (d) simultaneous Hebrew-English instruction requires strong, focused support to be effective.

Two significant outcomes were construed from this study. One hundred percent of participants in this study who worked in sequential programs expressed approval of the sequential biliteracy curriculum design, and only 42% of participants who worked in simultaneous programs approved of the simultaneous curriculum design implemented in their Hebrew day schools. Secondly, there appears to be no agreement regarding effective instructional methodology for early heritage language literacy learners in Hebrew day schools.

Interpretation of the Findings

The qualitative case study was carried out for the purpose of exploring educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew day schools. The study's literature review included insights into the CLT, the influence of early literacy learning on reading achievement, literacy curriculum design, dual-literacy learners, simultaneous versus sequential instruction, Hebrew-English heritage language learners, and the value of teachers' perceptions. In the section that follows, I present the four themes and an interpretation of the collected data.

Determination of Hebrew-English Sequence

The first theme extrapolated from the interview data was: School administration chooses a specific sequence of instruction based on cultural philosophy and external considerations.

The teachers and preschool coordinators who participated in this study shared their perceptions of the factors that determined the sequence of early literacy instruction in their Hebrew day schools. According to the information shared by the participants, cultural and philosophical factors were the primary reasons for Hebrew-English sequential teaching. The educators who introduce Hebrew-English sequentially also believed that Hebrew should be taught first because it is a phonetically regular, shallow orthography with explicit letter-sound associations, thus making it less challenging for students to learn. Educators who introduce English-Hebrew sequentially believed English to be a socially constructed language that should be taught first because children have schema to support English literacy acquisition. In both cases, educators built literacy skills from the language perceived to be less difficult to acquire. This approach aligns with Sweller (2010), who posited that new knowledge is successfully integrated when it is built carefully upon prior knowledge. The sequential approach to biliteracy instruction also aligns with the studies of researchers such as Agheshteh (2015), Berens et al., (2013) and Velasco and Fialais (2018). Instruction designed to integrate new material into existing schema aids mental processing and produces increased learning outcomes (Gilboa & Marlatte, 2017).

In contrast, only two of five preschool coordinators and two of seven teachers who introduced bidirectional codes simultaneously were advocates of the simultaneous model of Hebrew-English literacy instruction. These participants believed that learning dual bidirectional orthographies simultaneously is more effective because the brain is elastic, students are given additional time to review the two codes by introducing both at

an early age, and students learn to better associate the two alphabetic codes when they are taught simultaneously. Fifty-eight percent of the participants who introduced Hebrew and English simultaneously, however, did not approve or see the benefits of simultaneous Hebrew-English biliteracy instruction. These participants perceived that simultaneous instructional design was determined by outside factors such as social, parental, and academic expectations, rather than on research-based cognitive development.

Participants in the study also perceived UP-K guidelines and first grade Common Core State Standards as academic influences that affect bidirectional early literacy design. Participants who perceived UP-K directives and Common Core State Standards as external factors that influenced curriculum design believed that the biliteracy curriculum was, at least partially, determined by guidelines developed for students expected to master only the English alphabetic code. Most participants did not express their perception that simultaneous instruction was based on research-based evidence that linked orthography-specific brain development of young children to the educational implications of teaching bidirectional alphabetic codes (see Guida et al., 2018; Jasińska et al., 2017). Educators in participating Hebrew day schools perceived that school administrators took cultural and external factors into account when determining early biliteracy curriculum design.

Effective Hebrew-English Instructional Practices

The second theme that was synthesized from the data was: Bidirectional reading acquisition is influenced by instructional practices, staffing, and classroom environment.

The teachers and preschool coordinators who participated in this study shared their perceptions of instructional practices specific to biliteracy instruction. The perceptions of the teachers and preschool coordinators varied widely from school to school. Perhaps the most striking feature of the findings of this study was the disparity of information obtained from the participants representing Hebrew day schools.

Instructional practices specific to teaching Hebrew and English to early heritage language learners varied among the Hebrew day schools. The age of introduction to one or both alphabetic codes ranged from 4- to 6-year-old children. Sequence of introduction to the actual alphabet was consistent in Hebrew but differed in English. The Hebrew alphabet was always presented in order of appearance because this approach is the traditional method of introducing the Hebrew alphabet. Instruction of the English alphabet was not always sequential in nature. The English alphabet was presented based on shape, frequency of usage, or appearance, depending on the English reading program being used. Rate of introduction to the English alphabet also differed and varied from one to three letters per week.

The participating schools all employed experienced teachers with a passion for educating young heritage language learners. Experiential knowledge, coupled with a desire to see all students achieve optimally, were uniting features of all participants.

In most of the participating Hebrew day schools, the school day was divided in half with lunchtime as the midpoint. In sequential settings, literacy instruction focused on one language in the morning and afternoon sessions. Similar to single literacy classrooms, multimodal instructional activities in large and small group configurations

were used to teach early literacy. In the simultaneous programs, most classes were similarly divided with lunchtime as the divide between language instruction. English or Hebrew instruction, depending on cultural orientation, was taught when the children came in the morning, and the second language was taught in the afternoon. In settings where the day was not clearly divided between Hebrew and English, teachers reported only a loose separation between instruction of the Hebrew and English alphabetic codes. The same staff taught the students from the time of arrival until dismissal and incorporated Hebrew and English instruction interspersed throughout the day. The teachers all perceived the staffing and scheduling in their educational setting as appropriate for the sequence of instruction being implemented.

Preschool coordinators, however, perceived an opportunity for improvement in the area of staffing and scheduling. One salient point shared by preschool coordinators was the need for professional development that focuses on skills necessary to teach bidirectional literacy. Professional development that recognizes and validates participants will more likely be accepted and implemented in the classroom (Donnell & Gettinger, 2015).

Participants also described diverse classroom environments. In some of the preschools the children learned Hebrew and English in the same room, at the same circle, on the same rug, and at the same table. In other schools, the children were instructed in Hebrew on one side of the room and learned English on a different side of the classroom. In yet another school, the children learned only English in one classroom and transitioned to an adjoining classroom for Hebrew. Classroom décor aligned with the school's

approach to biliteracy instruction. In some classrooms, English and Hebrew signs, posters, and classwork displays were divided by language, with each teacher displaying work on a specific wall or bulletin board. In other classrooms the artwork was interspersed throughout the room, irrespective of language. In one classroom the top half of the wall was reserved for Hebrew and the bottom half earmarked for English. Finally, one school provided separate adjoining rooms for preschoolers learning each language and the children were totally immersed in either English or Hebrew, depending on the location.

These substantive and essential differences in instructional methodology may be interpreted as a need for evidence-based guidelines specific to teaching bidirectional orthographies to early language learners. The quality of early literacy instruction has been shown to correlate with reading outcomes in elementary school and beyond (Foorman et al., 2017) The significance of early reading instruction with young children has been well documented (Saracho, 2017). Findings from studies provide evidence that introducing effective early literacy instruction to preschool children may prevent the need for costly remediation services in later years (Dombek et al., 2016). Instructional practices, staffing, and classroom environment were perceived as factors in the bidirectional reading acquisition of Hebrew-English heritage language learners.

Advantages and Disadvantages of Sequential and Simultaneous Instruction

The third theme that emerged from the detailed narratives was: Advantages and disadvantages exist for both sequential and simultaneous early literacy instruction. Participants who taught in sequential biliteracy Hebrew-English programs perceived only

positive outcomes from the method of instruction implemented in their classrooms. The introduction of English or Hebrew as the first language differed among the five schools that followed a sequential model. All educators approved of teaching sequentially, regardless of whether Hebrew or English was introduced first.

Only two preschool teachers and two preschool coordinators advocated for simultaneous biliteracy instruction. Basing this approval on the brain's elasticity and the benefits of extensive review, teaching the Hebrew and English orthographies was deemed advantageous to early heritage language learners by preschool coordinators. Teachers who perceived simultaneous instruction as effective believed that children who struggle with reading would do so, regardless of the sequence of instruction.

Notable were the number of educators who disapproved of the simultaneous model of instruction implemented in the school setting in which they worked. More than half (58%) of the participants disagreed with the effectiveness of simultaneous instruction. These teachers and preschool coordinators concurred that teaching Hebrew and English simultaneously created reading problems for children, including directionality, lack of proficiency, and anxiety. Furthermore, it was perceived that the time spent on teaching the 22 letters of the Hebrew alphabet and the 26 letters of the English alphabet to 4-year-old and 5-year-old students detracted from time that could be spent on social-emotional development, pivotal to young children's overall growth.

Teachers play an important and influential role in educating our students (Gort & Pontier, 2013). Teachers' expertise in their content areas must be recognized, and goals and thoughts on where and how to emphasize instruction must be elicited and valued.

Effectiveness of instruction has been shown to correlate directly with teachers'

endorsement of an educational program (Mady, 2016; Pyle et al., 2018). When teachers'

perceptions are not sufficiently respected the effectiveness of the curriculum may be

compromised (Mihai et al., 2017). Based on the perceptions shared during the interview

sessions, it appears that educators' concerns may not be sufficiently valued.

Support for Simultaneous Hebrew-English Instruction

The fourth theme disclosed by the data was: Simultaneous Hebrew-English

instruction requires strong, focused support to be effective. As previously discussed, only

four participants were strong proponents of simultaneous instruction. Even these

participants, however, acknowledged the need to provide strong, focused support to

ensure the successful implementation of simultaneous Hebrew-English instruction.

Advocates of simultaneous instruction, as well as participants who do not perceive the

benefits of teaching Hebrew and English at the same time, reported addressing any

impediments to acquisition as vital to its success.

Support for simultaneous Hebrew-English instruction included extra resource

room staff to work with children on an individual basis as soon as difficulties became

apparent. Hiring additional teachers to frequently assess and remediate children who

struggled to read was seen as being proactively effective. Review during the first few

months of year following the initial simultaneous Hebrew-English instruction also served

to alleviate concerns on the part of the teachers and students. Because months of review

are built into the curriculum, anxiety caused by academic expectations in first grade are

somewhat mitigated. Differentiation for students struggling to acquire both languages is

also provided in some of the simultaneous programs. An example of this differentiation was evidenced by teachers and preschool coordinators who reported the teaching of only one language to a child having difficulty and introducing the second language only after the first language was mastered. By differentiating instruction, every attempt is made to address the needs of children struggling to learn both Hebrew and English orthographies.

Summer homework is mandatory in one school to address the issue of attrition over the vacation months. With dual alphabetic codes freshly encoded in young heritage language learners, concerns in this area are magnified. To ensure retention of both alphabetic codes, teachers work throughout the summer to track their students' progress. Homework is submitted and returned on a regular basis which the teacher perceives as an effective method to support simultaneous Hebrew-English instruction in preschool.

The perceptions shared by participating educators indicate that simultaneous biliteracy curriculum design may be effective when considerable effort is put into ensuring its successful implementation. It appears, however, that a sequential biliteracy program, unanimously perceived as less cognitively taxing, may allow for more efficient literacy acquisition. Sweller (1988) posited that effective sequence of instruction positively influences outcomes. Learning is improved when there is a continuing development of new information based on prior knowledge that is stored in long-term memory (Leppink et al., 2015). The amount of effort that participants perceive as necessary for the successful implementation of simultaneous biliteracy instruction appears to bolster the argument against simultaneous bidirectional Hebrew-English curriculum design.

Limitations of the Study

To address possible limitations resulting from the relatively small number of participants in a single geographical location, educators who teach in single gender and mixed gender classrooms were included. Additionally, schools that enroll modern-Orthodox and ultra-Orthodox schools were included in this study to broaden the participant representative sample as much as possible. Private schools that enroll students from different culturally-nuanced Orthodox communities, within the same city, were included to mitigate the limitation posed by interviewing educators from one geographical location. Furthermore, only teachers with a minimum of 5 years of experience working Hebrew day schools were included to expand the amount of experience represented by the data.

Nonetheless, limitations in this exploratory qualitative case study do exist. These limitations include: the sole use of interviews as a data collection tool; telephone interviews; potential researcher bias; limited number of participants in each category; only female-educator perceptions; and a specific geographical location.

It was not possible to conduct observations because of a global health pandemic. Triangulation of data sources was achieved by interviewing both teachers and preschool coordinators who represent different groups of participants (Patton, 1999). Face-to-face interviews were also not feasible; however, telephone interviews were seen by Kraus (2017) as a vehicle to promote empathic accuracy.

Potential bias was addressed by bracketing and reflexive journaling prior to and throughout the interview process (Yin, 2016). Bracketing was addressed by taking time to

prepare myself before each interview. I made a concerted effort to follow the interview protocol and ask probing questions after each response. I was cognizant of any potential bias that might interfere with the results of the study throughout the data collection and coding process. I expended considerable time and effort to ensure the reliability of the information collected during the data collection. Member checking by means of a 15-minute follow-up phone meeting was also used to proactively address researcher bias. Descriptive narratives related to real-life phenomena were critically synthesized in a well-ordered process (Yin, 2016). This aspect of a qualitative case study may also mitigate limitations of this study.

The transferability of this study may be limited by including only a small number of participants in each category of male, female, and mixed gender schools. Because the goal of the study was to include a broad range of biliteracy experiences, each subgroup was represented by only three to five educators. In a related effort to obtain the perceptions of different perspectives within the Orthodox community, both modern-Orthodox and ultra-Orthodox schools were included, which further limited the sample size of any specific group of participants. Furthermore, only female participants were interviewed for this the study, which precludes the perceptions of male educators. Additional themes may have also evolved from interviewing male preschool teachers and coordinators. Finally, all the participants were trained in the broad field of education/special education/school psychology, yet none of the participants had post-high school degrees that specialized in literacy and reading. Participants trained specifically in

the area of literacy may have added a further dimension to the perceptions that were shared.

Including Hebrew day schools from only one community within the United States may have also limited the study's transferability. Not all states are bound by Common Core State Standards and only 36 states currently offer government-funded UP-K programs. These external factors would, thus, not apply in all settings which limits transferability. The reader is charged with determining whether the results of this study are appropriate and relevant to other environments (Ravitch & Carl, 2016).

Recommendations

Based on the results of this exploratory qualitative case study, further research is recommended to provide an understanding of the biliteracy needs of early Hebrew-English heritage language learners. Further exploration should include (a) a similar study in other geographical locations within the United States to compare results, (b) a qualitative study to explore elementary school teachers' and principals' perceptions of the efficacy of early literacy curriculum design, and (c) a quantitative study to explore later reading outcomes based on both simultaneous and sequential early literacy instruction in preschool. Additional studies should attempt to include both male and female educators, as well as educators with literacy degrees, in the participant pool. Establishing a greater understanding of the biliteracy instructional practices currently being implemented in Hebrew day school preschool classrooms will allow this information to be disseminated among educators charged with teaching dual bidirectional codes to young heritage

language learners. Improvement in curriculum design may result in increased reading proficiency for students in preschool, elementary school and beyond.

There is insufficient research regarding effective sequence of instruction to early heritage language learners of bidirectional orthographies (Chan & Sylva, 2015). Kovelman et al. (2015) stated that instruction must be customized to specific languages and learners in order to be successfully implemented. Therefore, additional large scale exploratory qualitative case studies should include purposeful sampling and include Hebrew day schools that have student enrollment that differs in terms of gender, socioeconomic strata, parents' level of educational achievement, and level of Orthodoxy in an effort to determine whether these external considerations are a factor when instructing early literacy heritage language learners.

Academic success is built largely upon the ability to read accurately and fluently (Mihai et al., 2017). Biliteracy instruction is an area that requires educators' attention because of the increasing number of culturally diverse learners enrolled in schools in the United States (King & Butler, 2015). Heritage language learners are counted among culturally diverse students who require specialized literacy instruction (Creese & Blackledge, 2011). Although biliteracy of languages that share features, such as alphabet and directionality, have been well-studied (Lopez-Velazquez & Garcia, 2017; Raynolds et al., & Olivo-Valentín, 2017) bidirectional Hebrew-English instruction has not been well researched. Dual literacy acquisition results from teaching practices that are specific to the languages being taught, and instruction of typologically different language pairs is largely unexplored (Hsu et al., 2019). Additional quantitative case studies, with

measurable data in the form of test scores, would further evidence the effectiveness of Hebrew-English biliteracy instructional sequence and practice. Independent variables that may be included in a quantitative study might include: (a) age of introduction to direct literacy instruction, (b) student gender, (c) teacher training, (d) sequence of instruction, and (e) cultural orientation.

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. The findings from this study helps to address and reduce the gap in research regarding the practice of effectively designing a curriculum for early literacy Hebrew-English heritage language learners. The results of this research may help explain and clarify teachers' and preschool coordinators' perceptions of effective early bidirectional dual literacy curriculum design. It is planned that the findings revealed by this study will be presented at an annual conference presented by the National Organization of Hebrew day schools and a summary of the findings printed in *Hamechanech,* the quarterly publication that is nationally circulated by this prominent and established organization.

Implications

The implications of a research study suggest how the findings may be important beyond the individual results of a specific study (Yin, 2016). Reading is critical to academic, social, and economic success (Gunning, 2019; Mihai et al., 2017). Parkinson et al., (2015) stated that effective early literacy instruction has the potential to positively

affect future academics, career choices, and life outcomes. Immediate results of this study may be evident within the participant schools, extend to other Hebrew days schools in the community and, ultimately, to other regions within the United States. Heritage language learners of other bidirectional orthographies, such as Arabic-English, may also benefit from the data collected for this study. A deeper understanding of effective literacy design for early Hebrew-English heritage language learners has the potential to engender positive social change as a result of this qualitative case study. The research results may help heritage language learners of bidirectional orthographies benefit from effective instructional design of biliteracy instruction which has the potential to create positive social change by improving the reading ability and academic success of this growing population.

A large majority of participants reported parental expectations as an external factor in determining the literacy curriculum. In all cases, the parents perceived that academic achievement and student success was directly correlated with the introduction of direct alphabetic instruction at a young age. Parents related their children's ability to identify, associate, read, and write alphabetic codes as an indicator of the school's academic excellence. Instruction and achievement in the social-emotional domain were not seen as quantifiable signs of attainment to be valued in a competitive arena. Parents of early literacy learners may benefit greatly from organized workshops to educate and inform caretakers of the educational benefits inherent in nurturing the social-emotional development of young children. School-created webinars, seminars, and presentations that introduce the educational value of time spent on social-emotional advancement and

free play, as opposed to direct academic instruction to young children, may help reduce parental pressure to accelerate literacy instruction at a young age.

In all participant schools, simultaneous literacy curriculum was designed by administrators without teacher input. The simultaneous curriculum design implemented by administrators was deemed ineffective by four of seven preschool teachers, and three of five preschool coordinators. These number indicate that more than half of the educators (58%) who shared their perceptions regarding the effectiveness of a simultaneous Hebrew-English curriculum, disagreed with the curriculum design that was being implemented. Implications from this study indicate that curriculum design may be enhanced if the preschool coordinators and teachers charged with teaching the curriculum were included in the curriculum decision-making process. A committee or team, comprised of administrators, preschool coordinators and teachers should be formed to research, analyze, and discuss the most effective sequence of literacy instruction to early heritage language learners in Hebrew day schools. The National Organization of Hebrew day schools may be able to offer support and guidance as teams of educators work together to determine the most effective sequence in individual educational settings.

The results of this study indicate that eight participant schools implement a simultaneous model of literacy instruction to early Hebrew-English heritage language learners. Five participant schools implement a sequential model of instruction. This disparity of instructional sequence may indicate that a deeper examination of the advantages and disadvantages of each approach is warranted. Implications of this study may include the formation of a committee of Hebrew day school administrators to further

investigate the pros and cons of simultaneous versus sequential bidirectional early

literacy instruction. To promote and further social change, administrators of schools that

teach other bidirectional alphabetic codes, such as Arabic-English, could be invited to

join and work together to create a uniform curriculum for bidirectional dual literacy

learners. A well-designed curriculum, based in evidence and research, would be of

significance, long-term benefit for all heritage language learners who are faced with

learning two bidirectional orthographies at an early age.

Finally, the results of this study indicate a need for professional development

targeted to the needs of teachers of bidirectional orthographies. Seminars that focus on

practical strategies are viewed as relevant and encourage teacher participation (Körkkö,

Kyrö-Ämmälä, & Turunen, 2016). Connected to a well-designed, evidence-based

curriculum, professional development that is tailored to the biliteracy needs of the

students, teachers, and community has the potential to improve students' educational

experience and literacy acquisition.

All participants in this study evidenced strong enthusiasm and excitement for their

life's calling as educators of young heritage language learners. The passion for the field

of education and the deep-rooted desire to most effectively teach each and every student

was recorded in the journal notes that supplemented the interview process. The ultimate

goal of each teacher and preschool coordinator interviewed for this study was to offer the

most effective educational experience possible. I valued the educators' critiques as an

outgrowth of their desire to improve early literacy instruction in Hebrew day schools. By

agreeing to participate in this study, all teachers indicated a willingness to share their

perceptions to utilize the power of research to help early Hebrew-English heritage language learners and create positive social change.

Conclusion

The purpose of this study was to investigate preschool educators' perceptions concerning simultaneous or sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew days schools. In summation, effective early literacy instruction is pivotal to future academic success (Brown, 2014; Foorman et al., 2017; Gunning, 2019; Saracho, 2017; Snow & Matthews, 2016). Effective biliteracy instruction is thus vitally important to the increasing number of culturally diverse learners who speak English as a first language and learn a second language for cultural purposes (Carreira, 2004). Heritage and non-heritage language learners process language in different ways, and instruction must therefore be individualized to the specific needs of biliterate students (Son, 2017). There is limited research on bidirectional dual literacy instruction, with most studies focusing on alphabetic codes that share the same alphabet and directionality (Maciel et al., 2018). This study aimed to increase the study of bidirectional Hebrew-English biliteracy instruction in Hebrew day schools.

The CLT, upon which this study is grounded, assumes that new knowledge is best acquired when it is built upon prior knowledge (Sweller, 1988). Instruction that is carefully designed to build new schemata allows information to be completely integrated into long-term memory, which allows for processing new data with less mental exertion and improved learning outcomes (Poffenbarger, 2017). It is widely accepted that when

features of print are shared by two languages, simultaneous instruction allows for the transfer of literacy skills (Cummins, 2012). The study sought to explore teachers' perceptions of effective sequence of Hebrew and English which do not share alphabetic codes or directionality.

Interviews were the only data source for this study, and produced four themes that included: (a) school administration chooses a specific sequence of instruction based on cultural philosophy and external considerations; (b) bidirectional reading acquisition is influenced by instructional practices, class dynamics, and staffing; (c) advantages and disadvantages exist for both sequential and simultaneous early literacy instruction; and (d) simultaneous Hebrew-English instruction requires strong, focused support to be effective

All the educators charged with teaching Hebrew and English sequentially to Hebrew-English heritage language learners saw only advantages in this sequence of instruction. In contrast, 58% of educators who provided simultaneous bidirectional literacy instruction, perceived that simultaneously teaching Hebrew and English to young Hebrew-English heritage language learners is not an effective approach. The cognitive load inherent in teaching bidirectional alphabetic codes simultaneously was perceived by this majority as an extraneous load which causes anxiety and a lack of proficiency in both languages. Participants also perceived that simultaneous instruction of bidirectional orthographies detracts from preschool children's social-emotional learning and creates a dislike of reading because of the difficulties involved in its acquisition.

Educators' perceptions of curriculum design, instructional practices, and effectiveness of biliteracy instructional sequence should be utilized as a springboard to further investigate the sequence of Hebrew-English biliteracy instruction in Hebrew day schools. The findings of this study indicate participants' lack of support for simultaneous literacy instruction, and a lack of a cohesive, consistent, evidence-based approach to teaching literacy to early heritage language learners. Further research is needed to produce a research-based curriculum design for bidirectional early literacy instruction for the benefit of early heritage language learners. An improvement in biliteracy instruction will positively affect social change for all heritage language learners, their schools, and the communities in which they live.

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Appendix A: Interview Protocol

Interview Questions

I.   Greetings and Rapport

II.   Consent Form Review

III.   Review Purpose of the Study

IV.   Interview Protocol

V.   Closure

I.   **Greetings and Rapport**

I appreciate that you are taking the time to participate in this study. Your dedication to early Hebrew-English heritage language learners is greatly valued. I'm researching the sequence of Hebrew-English early literacy instruction in Hebrew day schools. The interview you're about to participate in will contribute to the knowledge of heritage language learning and positive social change as we work together to improve the reading instruction of culturally diverse students.

II.   **Consent Form Review**

Let's review the consent form before we start the interview

III.   **Review Purpose of the Study**

The purpose of this qualitative case study is to investigate preschool educators' perceptions concerning simultaneous or sequential instruction strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking emergent literacy learners in Hebrew day schools. There is a concern that the struggle to learn two bidirectional alphabetic codes at a young age results in poor reading outcomes in one or

both languages in first grade and beyond. It is well documented that emergent literacy instruction sets the foundation for future reading and that is why your role as a teacher/administrator of young heritage language learners is so pivotal to their success. I would appreciate if you would share your thoughts and opinions on the most effective method of teaching Hebrew and English to young children in Hebrew day schools so that we can help create a uniform early literacy curriculum in Hebrew day schools. Your participation will help answer the following research questions upon which the study is grounded:

RQ1: How do preschool educators perceive simultaneous instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ2: How do preschool educators perceive sequential instruction in developing biliteracy skills of Hebrew as a foreign language to English-speaking early literacy learners in Hebrew day schools?

RQ3: How do preschool educators perceive the effectiveness of teachers' simultaneous instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

RQ4: How do preschool educators perceive the effectiveness of teachers' sequential instructional strategies when teaching dual bidirectional alphabetic codes of English and Hebrew to English-speaking early literacy learners in Hebrew day schools?

IV.   **Participant Questions**

The interview consists of six general questions which will be followed by a probing question that will be asked for the purpose of clarification. I will audio record our interview session and take notes in a journal during our sessions. Your perception of the effective sequence of early reading instruction to English-speaking Hebrew heritage language learners will be shared without identifying your school or name to ensure your confidentiality. Do you have any questions you would like to ask before we start?

V.   **Interview Protocol for Preschool Teachers**

1.   What sequence of Hebrew-English literacy instruction is currently implemented in your preschool classrooms?

- Can you tell me more about how this instructional time is structured?

2.   What strengths and weaknesses do you perceive in the sequence of Hebrew-English that is currently implemented with your students?

- Give me examples ….

3.   Please describe some of the activities included in your literacy instruction.

- Tell me more about…

4.   What role do you, as the teacher, play in determining the sequence and assessment of biliteracy instruction?

- Give me specific examples…

5.   What is your personal philosophy regarding the sequence of teaching Hebrew and English reading to English-speaking emergent literacy learners?

- Why?

6. What information can you add regarding your perceptions of teaching Hebrew and English orthographies to emergent heritage language learners?

V. **Interview Protocol for Administrators**

1. What sequence of Hebrew-English literacy instruction is currently implemented in your preschool classrooms?

   - Can you tell me more about how this instructional time is structured?

2. What strengths and weaknesses do you perceive in the sequence of Hebrew-English that is currently implemented with your students?

   - Give me examples ….

3. Please describe some of the activities included in your literacy instruction.

   - Tell me more about…

4. What role do you, as the administrator, play in determining the sequence and assessment of biliteracy instruction?

   - Give me specific examples…

5. What is your personal philosophy regarding the sequence of teaching Hebrew and English reading to English-speaking emergent literacy learners?

   - Why?

6. What information can you add regarding your perceptions of teaching Hebrew and English orthographies to emergent heritage language learners?

VI. **Close of Interview**

On behalf of all the early heritage language learners who will benefit from your time and expertise, I would like to express my sincere appreciation for the time and information you shared with me today. After I've carefully reviewed your responses, I will contact you to confirm that you agree with my analysis of today's interview. What is the most effective way for me to contact you?

Interviewee code number: _____

Interview start time: _____

Interview end time: _____

Appendix B: Participant Questionnaire–Preschool Teacher

1.   What is your educational background?

_____ Bachelors of Arts/Bachelors of Science

College: _____

Major: _____ _____

_____ Masters of Arts/Masters of Science

College: _____

Major: _____

_____ New York State Teacher Certification Birth – 2

_____ Post High School Hebrew Seminary Teachers' Certificate

2.   How long have you been teaching in a Hebrew day school?

_____ 1-5 years

_____ 6-10 years

_____ 10-15 years

_____ More than 16 years

How long have you been teaching preschool?

_____ 1-5 years

_____ 6-10 years

_____ 10-15 years

_____ More than 16 years

3.   Which Hebrew day school preschool grade are you currently teaching?

_____ Nursery

_____ Kindergarten

_____ Pre-1-a

4.   How old are the children?

_____ 3 years

_____ 4 years

_____ 5 years

5.   Is your class segregated by gender?

_____ Yes

_____ No

6.   If yes,

_____ Males

_____ Females

7.   How many hours are designated for Hebrew instruction? _____

8.   How many hours are designated for English instruction? _____

9.   What is the language primarily spoken at home?

Hebrew _____

English _____

Other (specify) _____

10.   Are students formally exposed to Hebrew and/or English literacy instruction

before entering your class?

_____ Yes

_____ No

11.　　In which grade is formal literacy instruction introduced? _____

12.　　Literacy instruction is introduced first in which language, or are they both

introduced from the onset of the students' educational experience?

_____ Hebrew

_____ English

_____ Both

Appendix C: Participant Questionnaire–Administrator

1.   What is your educational background?

_____ Bachelors of Arts/Bachelors of Science

        College: _____

        Major: _____ _____

_____ Masters of Arts/Masters of Science

        College: _____

        Major: _____

_____ New York State Teacher Certification Birth – 2

_____ Post High School Hebrew Seminary Teachers' Certificate

2.   How long have you been an administrator in a Hebrew day school?

_____ 1-5 years

_____ 6-10 years

_____ 10-15 years

_____ More than 16 years

3.   Are the classes segregated by gender?

_____Yes

_____ No

4.   If yes,

_____ Males

_____ Females

5.   How many hours are designated for Hebrew instruction? _____

6.   How many hours are designated for English instruction? _____

7.   What is the language primarily spoken at home?

       Hebrew _____

       English _____

       Other (specify) _____

8.   Are students formally exposed to Hebrew and/or English literacy instruction before entering your preschool program?

_____ Yes

_____ No

9.   In which grade is formal literacy instruction introduced? _____

10.   Literacy instruction is introduced first in which language, or are they both introduced from the onset of the students' educational experience?

_____ Hebrew

_____ English

_____ Both