

## **Abstract**

### Effects of Teacher Directed Games on Vocabulary in a Second Language

This dissertation studied the effects of Teacher Directed Games (TDGs) on student vocabulary development and student engagement in a second language. Achieving automaticity with vocabulary is crucial to mastering a second language. A sample of 40 first grade students in a Jewish Day School participated in the study. Students learned their vocabulary words for the third module of the school year using their typical methods of instruction and drill. During the fourth module students participated in an intervention, using TDGs to review vocabulary. After each module students' vocabulary was assessed using a traditional vocabulary test, and their level of engagement was determined using self-reports and observations. Results indicated that students' vocabulary test scores increased slightly from module 3 to module 4. However, their level of engagement and interest in Hebrew language learning, as shown on self-reports, did not show significant improvement. Data from the behavioral observations suggest that the intervention is associated with an increase in peer interaction and behavioral observations of pleasure and enjoyment in learning. An open-ended informal interview was conducted with each student to provide additional information and revealed that students generally enjoyed using TDGs as a method of acquiring second language vocabulary.

EFFECTS OF TEACHER DIRECTED GAMES ON  
VOCABULARY IN A SECOND LANGUAGE

By

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## **Chapter 1: Overview**

This study will explore the relationship between elements of play and vocabulary learning and acquisition in a second language.

Language is the cornerstone of how we communicate, how we connect, and how we live in a society (Saffran, Senghas, & Trueswell, 2001). Successful language instruction in the formative years, is the “precursor” for future language learning and it establishes foundational skills that will be used across all future subjects (Lonigan & Shanahan, 2009; NAEYC, 1998). While there are many components to language development, acquisition of a large vocabulary base is a key factor in literacy and language proficiency, especially during the primary school Grades 1-3 (NAEYC, 1998).

Vocabulary is crucial for language development because words and their meaning form the building blocks of language (Gu & Johnson, 1996). To support language facility, vocabulary acquisition must reach the level of automaticity, such that words are retrieved from memory without needing to attend to the process of retrieval (Samuels & Flor, 1997). This leaves the learner open to process other tasks simultaneously and engage in higher order thinking (Samuels & Flor, 1997; Tinkham & Weinstein-Shr, 1989). Reaching this level of automaticity is accomplished through repeated practice (DeKeyser & Criado, 2012; Samuels & Flor, 1997) which often takes the form of drill, rote learning, and repetitive tasks. These activities are frequently monotonous and not engaging, leaving the young learner ambivalent at best (Yang & Dai, 2011). Another common aspect of repeated practice is its reliance on rote review of isolated vocabulary words that are devoid of context, making them irrelevant

to students' daily lives (Avni, 2012b). Improving the process of vocabulary instruction and this drive to automaticity is crucial, as it has the ability to yield important benefits for students, such as a higher level of engagement with the material and better retention of vocabulary and the content being taught (Bahrick, 1984; Samuels & Flor, 1997).

Hebrew language development is an important focus in English speaking Jewish Day Schools (JDSs) and begins in the primary grades (Pomson & Wertheimer, 2017). This is the basis for all future textual learning done in Judaic studies classrooms in subsequent years and provides a solid core foundation of knowledge for students to be able to communicate in Hebrew (Harris, 2018). Students begin by learning basic Hebrew vocabulary words, and the basic rules of grammar and syntax to support and apply the new vocabulary (Pomson & Wertheimer, 2017). This initial instruction lays the framework for further Hebrew language acquisition (Pomson & Wertheimer, 2017). As students progress, they build upon this learning and begin to acquire more advanced Hebrew language skills, such as textual based decoding and comprehension of the Tanakh- the three parts of the Masoretic Text (Cashman, 2016). As the study of Torah, a Hebrew text, is one of the central tenets of the Jewish religion, the acquisition of Hebrew language skills plays a fundamental role in every Jewish Day School curriculum (Zeldner, 1977). Furthermore, researchers have posited that it is essential for students in JDSs to be successful Hebrew learners if they are to maintain a strong sense of belonging and connection to the Jewish faith (Cashman, 2016; Rosowsky, 2012; Sales, et al., 2007). Hebrew is the language used for prayer, for participation in synagogue, and for individual and collective customs which take place throughout the year, such as the blessings one uses before and after eating, and participating in the Passover seder. Without the presence of Hebrew language students would quite literally be left out of Jewish

community life (Avni, 2012a). While isolated words and phrases may be used culturally at home and synagogue, they are not used nearly enough to build fluency in the language. This creates an issue since many students in JDSs do not speak Hebrew regularly at home and are not fluent in the language. Hebrew, therefore, can be viewed as a second Language for these students (L2; Avni, 2012b).

Decades ago, it was established that studies of vocabulary acquisition in L2, primarily explored how students learn English vocabulary in the context of English as a Second Language (ESL) or English as a Foreign Language (EFL; Baker, Simmons, & Kameenui, 1995). Extending this work to the Judaic studies classroom, and studying Hebrew vocabulary as an L2, is a natural continuation of previous studies done in this field. This is especially cogent to JDS students since the role of religious ritual is involved, students must have a deep understanding of Hebrew language as opposed to typical L2 learners, where only reading the new language may be required.

A logical tool to consider for increasing learning and automaticity in vocabulary skills is play. In early childhood classrooms, which in the United States applies to children between birth and approximately age 6 (Kamerman & Gatenio-Gabel, 2007), play has been shown to improve vocabulary acquisition (Han, Moore, Vukelich, & Buell, 2010; Van Oers & Duijkers, 2013), help students develop literacy skills (Korat, Bahar, & Snapir, 2002), and retain and generalize new knowledge (Van Oers & Duijkers, 2013). Play has the added benefit of conferring socio-emotional benefits, which are beyond the scope of this paper.

Play is a complex activity with many variables and perspectives, thus making it hard to define. Fung & Cheng, (2012) state that many of the studies that have been done regarding play fail to provide a universally accepted working definition of play. They instead describe

play by focusing on the “phenomenological features” (p. 19) of play, in other words, how the student views play, and how the student engages in play. While many of the features of play occur in the mind of the learner and are therefore indiscernible, there are some observable inherent qualities of play, such as authenticity of the activity and relevance to students’ lives (Dewey, 1916), student autonomy/agency, and students’ involvement and active engagement in the act of play (Carlsson & Samuelsson, 2008; Podolefsky, Rehn, & Perkins, 2013). While there are numerous studies which investigate the benefits of play in the early childhood classroom (Beisser, Gillespie, & Thacker, 2012; Cheng Pui-Wah, Reunamo, Cooper, Liu, & Vong, 2015; Han, Moore, Vukelich, & Buell, 2010; Kotsopoulos, Makosz, Zambrzycka, & McCarthy, 2015; Korat, Bahar, & Snapir, 2002; Reynolds, Stagnitti, & Kidd, 2011; Van Oers & Duijkers, 2013; Yoon, 2014), there are comparatively few studies that consider play based learning in the primary classroom (Briggs & Hansen, 2012).

Since this study will focus on primary age students, it is developmentally appropriate for play that is designed to enhance learning, to take the form of Teacher Directed Games (TDGs; Walsh, et al., 2010). TDGs are games with fixed rules created by the teacher that reinforce specific language and skills, in this case, vocabulary, previously taught by the teacher. TDGs retain all of the elemental aspects of play, such as authenticity, relevance, agency, and active participation (Carlsson & Samuelsson, 2008; Dewey, 1916; Podolefsky, Rehn, & Perkins, 2013), therefore, for the purposes of this study, the form of play we will explore is TDGs, and the two terms will be used interchangeably.

This quasi-experimental study, uses a convenience sample of Grade 1 students in a JDS all-girls Yeshiva in Queens, NY. The intervention, vocabulary review through TDGs, was administered during the last month of a three-month period. The participants engaged in



play-based teacher directed review games for 30 minutes, three times a week. The group took a teacher created pre-test at the end of module three of the school year, prior to beginning the TDG intervention, and a post-test at the end of module four, as a measure of academic achievement in the form of vocabulary retention; a pre and post student on-task observation by an adult; and a pre and post intervention self-report survey of student engagement. Results of all three measures were coded and analyzed. At the conclusion of the study, a survey including a mix of open ended and closed ended questions was administered to students. This study received IRB approval and followed all IRB guidelines.

Considering that this is an initial exploratory study, it has been designed to establish the importance of this topic in the field of Jewish education, and hopefully form a basis for future study. The focus of this study is on vocabulary acquisition, in isolation from the broader context of the elements of language. Therefore, this study does not seek to address bigger issues of learning Hebrew language, such as the ability to incorporate new vocabulary into the greater schema of language understanding and usage, or to overall changes in IQ.

The results of this study may establish the value of using TDGs to foster vocabulary retention and can inform future research. Findings from this study could potentially have practical applications in the classroom, in relation to how play in relation to vocabulary, can be utilized in the Judaic studies primary grade classroom. Positive effects could include a paradigm shift on how early elementary Hebrew vocabulary is taught, moving from more traditional learning and review to a more play-centric approach.

## **Chapter 2: The Study Problem**

Considering the importance of vocabulary and the need for its retrieval to be automatic, it could be assumed that addressing this in a school setting should be a fairly simple and straightforward task. However, the repeated practices used to achieve vocabulary automaticity, such as flashcards, worksheets, and repetitive songs, are often not engaging, stimulating and inspiring for students (Yang & Dai, 2011). This creates a challenge for teachers who must balance the need for repetition with the critical need to maintain students' interest (Tinkham, 1989). This issue is compounded by what we know about young children's attention span and their ability to remain engaged and focused. By the age of four, 40% of children have attentional issues that are significant enough to interfere with learning, and the percentage of students with such issues tends to rise as they get older (Mahoney & Schneider, 2012).

As an added factor, children growing up in the current technological era are accustomed to accessing the instant, fast paced, and exciting entertainment of their choice. This creates another layer of difficulty for teachers, since teachers must now compete with the high-speed nature of technology to maintain student engagement (Sales, Griben, Koretz, et al., 2006). Teachers must find a way to create a learning environment that is highly entertaining and incorporates choice (Conklin, 2014). This further complicates instruction, especially in an L2 classroom, where the curriculum consists of teaching isolated unfamiliar words and phrases, which are irrelevant to students' lives, and are of little interest to them (Podolefsky, Rehn, & Perkins, 2013).

Students' perceptions of the necessity of learning Hebrew language also contribute to the difficulty in teaching Hebrew as an L2. Many English-speaking students do not see the intrinsic reasons and benefits to learning the Hebrew language fluently (Walters, 2019). Older students may view it as a means to an end, for the sole purpose of being able to participate in prayers and religious ceremonies upon reaching adulthood (Walters, 2019). It is unclear whether younger students even perceive a long-term benefit to learning Hebrew. Thus, according to Blum (2017), teachers find they are competing with the inherent constraints of learning a second language, which can be 'boring'; the excitement of technology, its instant gratification, and level of choice; and students' own perceptions of and disinterest in learning Hebrew as an L2. As an additional constraint, learning Hebrew involves learning a completely new alphabetic system, unlike other languages such as French, or Spanish which use the Latin alphabet (Blum, 2017).

As established in the previous section, Hebrew can be thought of as a second language in JDSs. Developing a strong aptitude for understanding and using Hebrew language is crucial in a JDS. Students who ultimately do not master Hebrew cannot participate in the learning in higher grades and may become marginalized, since much of the participation in Jewish rituals is dependent not only on being able to read Hebrew, but to understand it as well. (Zisenwine, 1997). According to Selinker (1972) only 5% of students achieve proficiency in a second language. The impact of not becoming proficient in Hebrew as an L2 can be significant and highly detrimental to the student's future academic growth in the JDS setting, and their socio-emotional wellbeing in their larger religious community.

The 2013-2014 Census of Jewish Day Schools indicated that of the 255,000 students in Jewish schools across the United States, 46,000 students were enrolled in centrist/modern

Orthodox Day Schools (Schick, 2014). Of the 255,000 students, 190,195 were in schools in the Northeastern seaboard. In the 2018-2019 Census of Jewish Day Schools, the number of students in JDSs was 292,172, indicating a 14.7% increase in a mere five years. A full 68% of these students attend Orthodox (or Hasidic) JDSs along the eastern seaboard (Besser, 2019). This increase in numbers indicates that there are a considerable number of students in JDSs; thus, the instruction taking place in JDSs is impacting many young students.

There are several compounding issues at the school level as well. Many Hebrew language teachers are not trained professionally and specifically in L2 instruction (Winshall, 2011). Trained professional L2 teachers are taught to understand how the brain acquires language learning and the most appropriate techniques for successful language instruction (Huth, Betz, & Taleghani-Nikazm, 2019; Montague, 1997). Additionally, many teachers hired to teach Hebrew language are not native Hebrew speakers (Mintz, 2006). Furthermore, JDSs frequently create their own curriculum and adopt a method of instruction they believe to be beneficial. These complications result in a wide disparity in regards to teachers' pedagogical knowledge, and schools' curriculum and uniformity of instruction (Hirsch, 2019).

Hebrew as an L2, and especially the subcategory of vocabulary learning, does not have a robust body of empirical research and corresponding literature (Shohamy, 1999). A lack of adequately trained Hebrew L2 teachers, lack of research studies leading to evidence-based practice, lack of uniformity of curriculum and pedagogy, and a lack of communally agreed upon standards and central body of oversight characterize the field of Jewish education and Hebrew as an L2 today (Ringvald, 2011; Winshall, 2011). This study seeks to address at least one of these issues, by evaluating a means of vocabulary instruction that is

developmentally appropriate, and will point JDSs in the direction of best practice that addresses students' needs and thereby raises learning outcomes. We currently lack sufficient research-based practice in this area, which is a detriment to current classroom practice and application, and also inhibits further exploration (Shoahmy, 1999). A starting point is needed for understanding, facilitating, and further researching of automaticity of vocabulary learning in Hebrew as an L2 in the primary grades, since mastery of Hebrew vocabulary is so crucial to students' ability to learn Hebrew to the level of proficiency in later years. This study will lay the foundation for much needed research in how to facilitate vocabulary acquisition for young children in Hebrew as an L2.

## **Chapter 3: Literature Review**

### **Introduction**

This section will help the reader understand the background theories and disciplines, which form the basis for this study's research questions, purpose, and significance. This literature review will begin with a consideration of the best methods for teaching vocabulary in the early childhood classroom, how these methods parallel the construct of play, and how guided play in the form of TDGs embodies these qualities in primary classrooms. Next, this review will reflect on the components of vocabulary in Second Language Acquisition (SLA); different forms of input used in vocabulary learning; the history of research in vocabulary acquisition in a second language; and a small sampling of the different methodologies used to teach vocabulary in a second language. It will then explore the concept of automaticity, how it is achieved, its properties, different theories of automatization, the role of repeated practice in automatization, rote learning, retrieval versus traditional studying as repeated practice, when repeated practice should occur, and the role of active learning tasks in automatization. Finally, student engagement will be explored, with an emphasis on its effects on student learning.

### **Vocabulary/Language Acquisition in Early Childhood Education**

Language facilitates how we communicate with each other and make sense of our world. Vocabulary in turn, is the foundation of language and without a strong vocabulary base, all other language skills are hampered. In the early childhood classroom, the important work of building the foundation for all future language learning takes place. Therefore, early

childhood educators are tasked with constructing a literacy rich learning environment conducive to developing language skills (Clark, 2000; Massey, 2012).

There are several elements that promote vocabulary development in the early childhood setting, such as authentic learning activities that are meaningful to the student, that are self-directed and encourage student agency, that require the student to be actively engaged, and that tap into children's innate inclination to play and have fun. All of these factors taken together create an engaging climate for learning vocabulary (Excel & Linington, 2011). Often, the elements of authentic learning, meaningful and relevant learning, student agency, active learning, and the concept of play/fun overlap and can be evidenced in the same study.

### ***Authentic Learning***

Rousseau, the 18<sup>th</sup> century philosopher, advocated motivating a child to learn through authentic learning experiences (Rousseau, 1762, as cited in Cahn, 1997) and many educators and theorists who have followed in his wake expounded on his view of early childhood education (Cahn, 1997). Rule (2006) reviewed 45 studies across several disciplines and found four predominant themes in relation to authentic learning environments: learning involved real-world work, the learning environment included interaction with others, the learning included student agency, and the learning environment promoted thinking skills and metacognition along with open-ended activities. In the early childhood classrooms, these four constructs are often present during free and structured or guided play. Early et al. (2010) observed 652 Pre-Kindergarten programs across 11 states and determined that roughly 30% of the day was spent in play. The remaining time was spent on meals, classroom routines,

and teacher led instruction. This suggests that students spend roughly a third of their day engaged in authentic learning, often in the form of play.

O'Brian and Bi (1995) studied the use of language during authentic play in an early childhood classroom. Three different contexts for engagement were used, doll/house, blocks/trucks, and gross motor activity. While play with blocks/trucks evidenced the highest and the most interactive and complex usage of language for both teachers and students, results indicated that all three contexts for play provided opportunities for language use and development. Adding a control group to this study, which did not engage in play at all, would have provided an interesting and useful countermeasure to the results this study provided. Silverman and Crandell (2010) observed instruction in 16 early childhood classrooms with a total of 244 students and found that the more teachers integrated vocabulary into the day, the greater the vocabulary gains. Building on O'Brian and Bi (1995), combining authentic play with a greater emphasis on integrating more vocabulary could be a powerful method for building vocabulary capacity.

### ***Interaction with Others***

An important and necessary component of authentic learning is communicating with others during the learning process, both with adults and with peers. Vygotsky's (1978) Sociocultural Theory of Development, a seminal work in the area of social constructivism, established that young children learn and build their own knowledge through social interactions with others involving the use of language. While Vygotsky's theory has many other complex components, which are beyond the scope of this paper, his theory of how children learn by communication with others has become a touchstone in educational theory.



Adult-child interactions play a significant role in shaping language and vocabulary development. Cabell, Justice, McGinty, DeCoster, and Forston (2014) describe the importance of teacher- child conversation in the early childhood classroom as a means to develop vocabulary. Cabell et al. confirmed that when teachers allowed students to initiate the conversations the students learned more vocabulary. They attribute this to the students being more invested in topics of interest to them and were therefore more likely to be engaged learners and thus language users.

McLeod, Kaiser, and Hardy (2019) studied vocabulary growth in preschools by measuring teacher vocabulary usage in an authentic student-led context, one on one. Results indicated that vocabulary outcomes rise as a result of teachers using greater vocabulary in response to student initiation. The researchers stipulate that the findings support play-based learning (whether free or structured center play) due to the ‘naturalistic’ context of the interaction between student and teacher.

Snyder, Rakap, Hemmeter, McLaughlin, Sandall, and McLean (2015) reviewed 43 empirical studies about Naturalistic Instruction (NI), a common approach to instruction in the early childhood classroom, which embeds specific learning outcomes into a naturally occurring learning situation. The hallmarks of NI are student initiation, real world authentic activities that involve a targeted skill, and teacher scaffolding as needed. Snyder et al. (2015) found that in all but two of the 43 studies, students accomplished their learning targets using NI. From the description, it would seem that there are obvious parallels between NI and best methods for teaching vocabulary in an early childhood setting.

### ***Meaningful Learning***

Harris, Golinkoff, and Hirsh-Pasek, (2011) solidify the connection between vocabulary learning and authentic learning experiences and suggest that recreating the learning environment to resemble real world situations as closely as possible yields the highest retention in vocabulary since students need to learn word meanings and then adapt word usage in real-time. They posit, “Vocabulary is best learned when it is meaningful, when children are engaged, and when instruction is embedded in natural interactions” (p. 58).

Novak (2013) identifies three essential components for learning to be considered meaningful. The material has to have the potential to matter or mean something, the student needs to have the pre-concepts necessary to understand the material, and the learner must be willing to absorb and adapt the new knowledge into existing schema. Wood and Attfield (2005) describe meaningful learning as activities that simulate the real world, similar to the concept of authentic learning experiences. Aligning learning to ‘real-life’ makes learning meaningful for young children as they are in a perpetual state of making sense of the world around them. They also add that meaningful learning will have personal significance for and relevance to the child (Wood & Attfield, 2005).

### ***Student Agency***

Consistent with Rule’s (2006) finding of the importance of student agency, Parsons, Nuland, and Parsons (2014) highlight the importance of student agency in the classroom for learning and engagement. Giving students a sense of control over their learning increases their engagement in the learning. Centers, often used in the early childhood classroom during play, afford students the ability to choose their venue for learning, it offers the opportunity for self-directed learning and play in activities that are personally meaningful to the student

(Whorrall & Cabell, 2016). Therefore, providing choice to students encourages more engagement with the content, which could lead to improved learning outcomes.

Reviewing several studies on self-directed learning, Abdullah (2001) highlighted some of its many positive effects on students, such as fostering strong internal motivation to learn, love of learning, self-monitoring techniques, independence, self-knowledge, and critical thinking. As a natural part of child development, children seek opportunities to be increasingly autonomous, and self-directed learning is an authentic and logical venue that taps into students' innate tendencies (Abdullah, 2001).

Often in the early childhood classroom, the element of choice provided to students fills the need for self-directed learning, thus facilitating the student's engagement in literacy (Erickson & Wharton-McDonald, 2018). When students are able to choose to some extent how they will interact with the language they are learning, they are more likely to engage, and be successful, thus creating a positive recurring cycle of choice, engagement, and achievement (Erickson & Wharton-McDonald, 2018). Ponton, Schuette, and Confessore, (2009) call attention to the fact that young children often have very little control over their environment, as much of it is determined by the adults in their world. They suggest that self-directed learning is necessary to becoming a life-long learner and is worthy of being part of a child's early education. It is also instructive for students so they can learn about who they are as learners, which is also essential for future knowledge and growth. Therefore, while we cannot always change the content being taught as it is often predetermined, we can give students the ability to have an "...agentive influence over their lives..." (p. 55) albeit in a small way, thus giving them a small measure of control.

Students themselves would seem to be self-aware of the role agency has in learning. In an action research study conducted in Hong Kong, Lau (2008) assessed the pedagogy of 18 preschool teachers. Teachers tended to view work and play as intertwined in their classrooms. Students, however, took a different view and classified activities into work and play based on how much autonomy they had; learning experiences that involved teacher direction were viewed as work, while the ability to choose activities was viewed as play (Lau, 2008). It appears from the research that even in very young children, self-determination affects motivation and growth.

In their review of the origins of the study of student engagement, Taylor and Parsons (2011) point out that in the past several years, student engagement has come to be viewed as both a pedagogical tool and an outcome measure of effective pedagogical methodology. In this section, we refer to student engagement as the process, not the outcome.

Of the numerous studies conducted on student engagement, Taylor and Parsons (2011) found several commonalities, such as discovery-based learning, relevance to the student, interaction with others during learning, multimedia instruction, and authentic assessment. According to the authors, the primary elements that drive student engagement are what is being taught and how it is being taught. Hung, Tan, and Koh (2006) suggest that the engaged learning environment has several components; it is meaningful to students so that they take ownership for their learning, it is authentic work, it provides an opportunity to collaborate with others, there is input from 'experts' and students have the pre-requisite knowledge and resources they need to engage with the work.

### *Active Learning*

As stated earlier in this section, often the essential components of best methods for teaching vocabulary intersect. Kermani and Aldmir (2015) using a quasi-experimental design, conducted a study to highlight how active learning and choice affects learning outcomes. A total of 62 children in Pre-K programs either received their regular instruction, or had an intervention where they were supplied with classroom materials, activities, projects and books related to math, science and technology. All of the items provided were developmentally appropriate, hands-on, engaging, and meaningful to students. Students were also encouraged to choose what to engage with. Results indicated that students receiving the intervention scored better on math and science assessments and referred back to the technology vocabulary they had used during their learning (Kermani & Aldmir, 2015). These results could be attributed to the elements of student choice, and student engagement.

As a reinforcement of the above evidence of best practice in vocabulary instruction, Snow (2006) highlights the imperative for vocabulary instruction in pre-school, stating that it is a precursor and indicator for reading and listening comprehension, and future academic ability. Research-backed vocabulary instruction strategies such as active student engagement, meaningful activities, repeated practice, and learning vocabulary in context, such as from stories read aloud, have the greatest impact on vocabulary development (Jalongo & Sobolak, 2011). In a meta-analysis of 52 studies, Stahl and Fairbanks (1986) found that vocabulary development had a mean effect size of .97 on comprehension, indicating the importance of early vocabulary instruction. Stahl and Fairbanks (1986) identified several important factors that have the greatest impact on vocabulary growth- teaching the words in context along with

their definition, creating a greater depth of processing for students, and repeated exposures to the words in multiple contexts.

In their discussion regarding teaching vocabulary in the early childhood classroom, Neuman and Wright (2014) largely agree with the earlier research by Stahl and Fairbanks, and discuss several ways to build vocabulary in young children: teach words in context so that students have some schema and a semantic reference point with which to connect the new vocabulary; use a mixture of explicit (direct instruction) and implicit (incidental instruction) to teach words; and provide students with many opportunities to review the new words in an engaging way so they do not get bored.

In considering the factors that contribute to effective vocabulary instruction, it would seem that play could provide all that is needed. Hirsh-Pasek Golinkoff, Berk, and Singer (2008) explain why play is the ideal venue for vocabulary development. Play is naturally engaging for young children and helps maintain their interest and attention; play involves active learning which is also engaging for children; and play in and of itself is meaningful to the student. Over half a century ago, Dewey, a seminal educational theoretician, aptly stated that play is the work of childhood (Cahn, 1997).

### ***Play***

Play is a complex activity with many variables and perspectives, thus making it hard to define. Fung & Cheng, (2012) note that many studies regarding play fail to provide a working definition of play. They instead describe play by focusing on its “phenomenological features” (p. 19), in other words, what we observe in students engaging in play. Citing several other studies, Fung & Cheng (2012) identify play as a state where children are “intrinsically motivated” (p. 19), are free of guidelines, are completely immersed and

engaged- to the point of being unaware of the passage of time and experience a “lack of self-consciousness” (p. 19)

Play, in its various forms, often a large part of the day in the early childhood classroom, is the ideal forum for critical vocabulary instruction (Grifenhagen, 2012). Weisberg, Hirsh-Pasek, Golinkoff, Kittredge, and Klahr (2016) make the case that play in and of itself, while beneficial, is not enough to reach academic goals, and conversely pedagogy without the advantage of play, does not reach the level of benefits that pedagogy with play can attain. They therefore propose guided play for the use of learning vocabulary in the early childhood setting, stating that children’s natural inclination to play and academic goals are not dichotomous and can be successfully combined with positive results so long as the nature of play is guided, meaning scaffolded. Thus, the hallmarks of guided play are the simultaneously occurring aspects of student choice, and teacher guidance or direction.

Toub et al. (2018) conducted two studies to measure the connection between play and vocabulary introduced during story time, in the early childhood classroom. A sample of 249 pre-school children were divided into one of three groups, free play, guided play, or directed play. During free play, students choose what to play and who they would play with, without adult intervention. In the guided play group, the teacher set the learning objective, and the process of discovery through play was student directed with scaffolding from the teacher. During directed play, the teacher not only set the objective but also lead the student play. Students in all groups increased their vocabulary knowledge, however, students in the directed play and the guided play groups advanced further in their expressive language skills. In a second study, the vocabulary words were divided into two groups, one group of words were reviewed using flashcards with pictures, and the other set of words were reviewed using

a mix of guided and directed play. Both groups made strides in their receptive and expressive vocabulary skills and students who used play to review had the greatest gains in expressive skills.

Relatively few studies exist on play-based learning beyond the early childhood classroom (Briggs & Hansen, 2012). The studies discussed thus far can be considered developmentally appropriate for the early childhood setting, however, blocks, dollhouses, and center time are not ordinarily part of the primary grade classroom (Hunter & Walsh, 2014). What would be considered appropriate, both developmentally and practically, in a primary classroom? A suitable consideration may be using guided or structured play, as described in the two preceding studies. Guided and structured play are activities designed by the teacher to facilitate a specific learning outcome (Weisberg et al., 2016), thus they are adaptable to multiple grade levels, topics, and environmental constraints (such as available supplies, space, time allotment etc.) In the current study, structured and guided play in the primary grade classroom are referred to as TDGs, which mirror the elements of play in the early childhood classroom (listed previously).

### **Vocabulary Learning in SLA**

The preceding section discussed key aspects of vocabulary in the early childhood classroom. This section will discuss the attainment of vocabulary specific to a second language. The extensive research on second language vocabulary instruction is beyond the scope of this paper. The seminal questions of definition and a sample of studies that demonstrate the relevant issues follows.

As early as 1917, linguists had determined that there must be an internal mechanism for acquiring language within each person, and that it remained latent after the initial



language was acquired, until such time as it was necessary to learn a second language (Palmer, 1917). Many of the linguists and psycholinguists who followed such as Chomsky with his theory of 'universal grammar' (1966) and Selinker (1972), with his explanation of how language learners move from their native language, to interlanguage, to proficiency in the new target language through a series of processes, support the belief that our ability to learn language is inherently innate by nature. Selinker (1972) supported this rationale by pointing out that only about 5% of language learners achieve the proficiency of a native speaker in their second language; those that do reach that level of aptitude in a second language cannot attribute their success to 'explanation and instruction' but rather to their own innate ability to tap into their internal language acquisition system.

Biemiller (2012) believes that the system and pattern used for learning word meanings in English is the same for native English speakers and second language (L2) learners of English. This would suggest that the structure used by the brain for learning vocabulary follows a routine pattern of input and acquisition regardless of whether or not one is learning an L2. Lexical input processing is a theory that explains how the brain assigns limited processing resources as it learns new vocabulary words to the three components of vocabulary learning: word form, word meaning, and form-meaning mapping (Barcroft, 2004). Word form refers to how the word appears, both phonologically and orthographically, word meaning is the definition of the word- what the word represents in language form, and, form-meaning mapping is the association that connects elements of the word form to the word meaning. Studies indicate that as learners become more proficient in a language, they move from relying on word form to word meaning (Talmas, Kroll, & Dufour, 1999). Thus,

ensuring that students can identify and recall the meanings and definitions of the vocabulary words is crucial, as it indicates greater proficiency with the L2.

Many researchers believe that depth of processing during input is what leads to retention (Barcroft, 2004; Craik & Lockhart, 1972; Hulstijn, Hollander, & Greidanus, 1996; Hulstijn & Laufer, 2001; Laufer, 2003). Input tasks that involve greater processing capacity have been shown to generate better retention (Ahmed, 2012; Hulstijn, 2002; Hulstijn, Hollander, & Greidanus, 1996; Hulstijn & Laufer, 2001). Hulstijn and Laufer (2001) used three different levels of tasks, reading comprehension questions with definitions in the marginal glosses of the book; reading comprehension questions including fill-ins of the target words; and a task that involved writing a composition using the target words, to prove that the higher the involvement load, the stronger the retention. College-age students, 87 in the Netherlands and 99 in Israel, participated in the study which evaluated the level of their retention of 10 low frequency English words/phrases using incidental learning- meaning, students were not aware that they needed to intentionally commit the new L2 words to memory. Results indicated as expected, that in both the immediate test and delayed post-test, students in the composition writing group scored consistently higher than those in the comprehension with fill-ins group, which scored higher than the group involving the weakest level of depth of processing, the comprehension with definitions in the margins.

Research in vocabulary instruction in an L2 has focused on two methods of input, intentional vocabulary learning, and incidental vocabulary learning (Laufer, 2003). Intentional learning includes a direct instruction method designed to have the student remember lexical information, while incidental learning refers to "...the acquisition of vocabulary as a by-product of any activity not explicitly geared to lexical acquisition"

(Laufer, 2003, p. 574). Proponents of intentional learning rely on explicit instruction through the use of word work including elements such as learning synonyms and antonyms for the words, unscrambling the word, crossword puzzles, word searches, and multiple-choice definitions, none of which provide context for the word (Rashidi & Omid, 2011). Other methods of intentional learning include using a reading passage with a focus on content and related words (Nation, 2014).

Tresselt and Maysner (1960) define incidental learning as the taking in of new information without a purpose or goal, and without using formal instruction. In a study seeking to determine the impact of incidental learning on short- and long-term retention of vocabulary words in an L2, Javanbakht and Yasuj (2011) assigned 88 English as a Foreign Language Learner (EFL) male students in Iranian middle schools, to one of three groups: read a paragraph and answer comprehension questions, fill in the blanks with the target words and answer comprehension questions, and write a sentence with each of the target words. Both the immediate and the one-week delayed post-test indicated that group 3- the group with the most active role in the learning process- performed better on both the immediate post- test and delayed post-test, than the other two groups. These results align with and support the depth of processing theory; the greater the amount of work the brain does during inputting of new information, the higher the level of retention. Javanbakht and Yasuj (2011) chose middle school age students for this study, since in Iran students only begin learning English in middle school, thus replicating results one might find with beginning learners of a new language.

Seeking to determine which is most effective, intentional learning using the words' meaning, intentional learning using the words' etymology, or incidental learning, Alemi and

Tayebi (2011) taught two science chapters from a college level textbook to 30 university students in Iran. The greatest retention was accomplished in words taught intentionally and through meaning-based methodologies, which supports the depth of processing theory. Alemi and Tayebi highlight the difficulty in studying intentional versus incidental learning, noting that it is impossible to be inside the learner's brain when they learn vocabulary, thus making it difficult to determine definitively that no incidental learning is taking place even during intentional learning. Hulstijn (2002) concurs and adds that similarly, it is possible for the learner to have an *internal* goal or purpose when learning incidentally, thus making it problematic to ensure that incidental learning is taking place without any intentional learning occurring simultaneously. Since, as researchers suggest, the two may be inextricably linked, a combined methodology of using first intentional and then instructional learning may yield the best results for vocabulary retention.

Hulstijn (2001) maintains that the real distinction between intentional and incidental instruction lies in telling the student beforehand that they will be tested. If a student knows they will be responsible for recalling the vocabulary, their learning then falls into the category of intentional learning, as the student is now actively committing the word to memory. Hulstijn's definition of intentional learning is important to note, since often, it is understood by students that all information taught in the primary grades will be tested or evaluated in some way, thus making it difficult to assess the effects of incidental learning on vocabulary acquisition.

Examining the question of will incidental learning be increased if students have re-exposure to new words, Hulstijn, Hollander, and Griedanus (1996) concluded that learning words in context and repeated practice support vocabulary acquisition. The next section will

take a closer look at how repeated practice leads to automaticity and systemization of vocabulary in an L2.

### **Automaticity and Systemization**

Foundational skills, such as reading and writing, are pivotal to a child's success in school and beyond (NAEYC, 1998). The primary grades, Kindergarten through Grade 3, are the most beneficial times for this instruction to take place, as once students reach Grade 4, they are no longer learning to read and write, but reading and writing to learn (NAEYC, 1998).

For the level of skill needed to read and write proficiently, and in the case of L2 acquisition in order to be able to understand and communicate effectively, students need to learn the required material to the point beyond accuracy and fluency, known as automaticity (Samuels & Flor, 1997). Systematizing learned information to the point of automaticity is the process where through repeated practice and exposure, information and knowledge can be retrieved from memory automatically, without the need to rely on using algorithms or responses to stimuli that were successfully used in previous similar situations (Logan, 1988). Working at the level of automaticity allows the brain to focus on higher order thinking skills, such as metacognition and comprehension (Samuels & Flor, 1997), and evidence suggests that skills learned to automaticity are retained better in long term memory (Bahrick, 1984).

Automaticity has been studied over the past 40 years by many professional domains: psychologists, linguists, neurolinguists, psycholinguists, and educationalists (Hulstijn, 2002; Rodgers, 2011). There is much debate among researchers about how to operationalize automaticity since the process of automatizing knowledge is impacted by many variables and is not easily observable or measurable as the process takes place inside the learner's brain.

Some researchers believe that automaticity is a factor of attention (Logan, 1988). The modal view of automaticity, based on Kahneman (1973), views automaticity as a factor of attention only, whereby the process of automaticity is the gradual decrease of attention needed. This explains why automaticity allows rapid processing and response (it is not inhibited by the need for attention), it is autonomous and beyond conscious control since it does not need capacity, and is not controlled by consciousness (Logan, 1988).

Dougherty & Johnston (1996) argue that the terms overlearning, fluency, and automaticity are essentially the same since they share many of the same results, such as better long- and short-term retention, increased stamina to maintain level of work, stereotypical (vs. adaptability to novel situations), and improved ability to engage in related, complex tasks. The researchers note that what we perceive as different about each of these concepts might be due to the fact that we measure them differently.

Due to the inherent difficulties in defining and operationalizing automatization, researchers have frequently described it by its properties and external characteristics, such as quick response time (Jonsson, 2016), the ability to perform tasks without needing to designate attention or put in effort (Samuels & Flor, 1997), and that it is fast, effortless, autonomous, stereotypic, and not susceptible to conscious awareness (Logan, 1988). Since automaticity is the automatic retrieval of information which comes from stored memory it is optimal to survey a small sampling of the theories of memory retrieval, which follows below.

There are several general theoretical categories of how automatic retrieval happens; memory theories, information processing theories, and levels of processing theory (Atkinson & Shiffrin, 1968; Craik & Lockhart, 1972; Logan, 1991; Logan, 1998). Theories of memory processes contain three distinct parts- inputting the information, storing the information or

encoding it, and later retrieving the information (Logan, 1991). Information processing theories believe that information is encoded in a series of steps into three different forms of memory- sensory input/sensory memory, short term memory, and long-term memory (Atkinson & Shiffrin, 1968). The most well-known of the information processing models is the Three Box Model by Atkinson and Shiffrin (1968) described above. Levels of processing theory states that there is only one type of memory (as opposed to the information processing model) and the more complex the input, the greater the ability to retrieve the stored information ( Craik & Lockhart, 1972).

Logan (1988) coined the idea of an instance theory of automatization. “Automaticity is memory retrieval: Performance is automatic when it is based on single-step direct-access retrieval of past solutions from memory” (p. 493). In theory, a student starts the process by having a knowledge of a general algorithm that can be used to solve the problem. As they progress, they use specific solutions to solve specific problems and can retrieve the specific solution when it matches the problem encountered previously. As time progresses, they can use the algorithm or the specific solution to problem solve, and eventually the algorithm is not used, as the solution is retrieved directly from memory. This is the point of automaticity (Logan, 1988). Logan’s instance theory (1988) states that each individual learning experience is its own individual learning encounter and creates its own pathways to memory retrieval. When the learner attempts to retrieve the information, any of the pathways created can assist in retrieval, or pathways can connect to and draw upon other similar pathways that lead to the needed information. This theory contrasts with other automatization theories which state that once the pathway is initiated, all other instances of repetition and input imprint and build on the initial learning experience.

Anderson (1983) proposed a theory of automaticity known as Adaptive Control of Thought (ACT), which breaks knowledge into three parts, declarative, procedural, and memory. Declarative knowledge includes facts and information; procedural knowledge involves turning the information into procedures and rules; and over time and through practice, the knowledge is transformed to memory, where error rates and response times are reduced due to automatic retrieval of knowledge.

While there does not seem to be a consensus on the exact process of how knowledge becomes automatized, most researchers indicate that the process of reaching automaticity involves repetition, and repeated practice is an essential component to optimizing automaticity of skills (Palmeri, 2006). Different theories abound as to what form the repeated practice should take. Traditionally, rote learning was the form used for repeated practice (Klemm, 2007). Interestingly though, there is very little research on rote learning, also known as rote rehearsal (Tinkham, 1989) and what does exist points to the effectiveness of rote rehearsal on short term memory gains (Benjamin & Bjork, 2000; Yang & Dai, 2011). Rote rehearsal can be defined as “...the rote or cyclic repetition of information...” (Benjamin & Bjork, 2000, p. 639). This can take the form of word lists to memorize (Yang & Dai, 2011) and is often viewed as boring and repetitive work by students (Tinkham, 1989), thus diminishing their engagement in the task.

Mayer (2002) theorizes that only two of the 19 cognitive processes in the revised Bloom’s Taxonomy relate to the domain of *remember* in the taxonomy. *Remember* requires the learner to merely repeat back information. Of the six domains (remember, understand, apply, analyze, evaluate, create), rote learning falls into the category of *remember*, since it



does not require the learner to transfer knowledge, nor does it contribute to meaningful learning. Thus, rote learning can be thought of as one of the lower levels of learning.

A study conducted in England, assessing the perspectives of five middle school teachers responsible for teaching French as a foreign language, showed that teachers strongly believed that mere memorization and rote activities do not keep students motivated. Teachers listed several options to make learning a foreign language engaging, such as using games, and other activities such as class competitions (Mitchell & Martin, 1997).

In one of the earlier studies done on rote learning, Hilgard, Irvine and Whipple (1953) tested the effectiveness of deeper learning over the effectiveness of rote memorization on retrieval and transfer of new information. Sixty high school students were assigned randomly into two groups- one used rote memorization and the other used deeper, more involved learning of the concept. Both groups learned two card tricks requiring a sequenced placement of cards to achieve each trick. The memorization group was taught the sequence and practiced until they could reproduce the tricks correctly. The deeper learning group was taught the theory behind the trick by having students infer from the information given; they were able to ask questions and then had to recreate the sequence on paper. They then practiced with the cards until they were able to execute the tricks without error. Both groups received the same test on the following day; participants were asked to repeat the two card tricks from the day before and were then given four new card tricks to execute based on the two they had already learned. Results indicated that during the learning process on Day 1, the memorization group learned the tricks relatively quickly in comparison to the deeper learning group. On Day 2, participants were first asked to recreate what they had learned yesterday (recall task) and then complete four more tasks that involved transfer of what was learned

previously. On the first transfer task, a simple substitution variation of the original tasks, there was no significant difference between the memorization and deeper learning groups. However, on the remaining three transfer tasks, which involved the use of problem solving, indicated that the memorization group had only several correct answers, while the deeper learning group had more correct participant responses, though not quite as much as the researchers had anticipated.

The researchers theorized that one of the reasons the participants in the deeper learning group did not do as well as expected might have been due to their reliance on memorization on Day 2 in the recall tasks instead of reasoning through the problem, as they had done the day before. This implies that they did not fully understand what was learned previously or that they sought a quicker or easier method to solve the problem. Carelessness was also considered as an explanation for poor performance by the deeper learning group. As this study was conducted over 60 years ago, results of this study while valid and instructive, should be interpreted with caution.

In a more recent study, attempting to provide insight into which is more effective in middle school science classrooms in Pakistan, rote learning or experiential learning, Pell, Iqbal, and Sohail (2010) conducted a mixed method study to highlight the advantages of experiential learning. Eight classes of 384 students were divided into control and experimental groups. Control classes received regular science instruction consisting of memorization of the textbook, and some lecture from the teacher. Two topics were taught, electricity, and light and color. The experimental group learned the same science concepts through teacher demonstrations and the use of the blackboard. Both groups were required to

write a summary of what was learned, and students in both groups were encouraged to ask questions.

Post-test results on the topic of electricity indicated that the experimental group outperformed the control group. In the light and color topic, both groups post-test scores were vastly improved compared to pre-test scores, and girls in the experimental group, outperformed girls in the control group. The researchers attribute the differences in results between topics to the fact that the light and control test requires memorization of facts, while the electricity test relies more on application than recall. They add that students in the experimental group, most notably the girls, began thinking of electricity in terms of applying knowledge and thinking beyond the information given, while students in the control group likely approached tests in both topics as merely necessitating recall, thus yielding lower test results. One possible limitation to this study is its use of a convenience sample, and lack of randomized controls. Another issue pertains to the researchers' use of other forms of information input, such as writing a summary at the end of the lesson. If the control group used the learned information in more ways and in ways that required a greater cognitive load, it is questionable whether or not, the use of a textbook as memorization in the control group can be considered pure rote.

Though the literature on rote learning does not contain many empirical studies (Tinkham, 1989), there are studies describing the theory (Mayer, 2002), characteristics (Benjamin & Bjork, 2000; Klemm, 2007; Tinkham, 1989; Yang & Dai, 2001), and perceptions (Mitchell & Martin, 1997) of rote learning. While only a small selection of the literature has been cited here, some of the drawbacks to rote learning (inferior retention, lower-level learning, lack of transfer and meaningful learning), necessitate exploring other

alternatives to repeated practice. While it has long been believed that the best way to achieve automaticity is through the use of ‘study’ methods, such as flashcards, some researchers have concluded that retrieval in the form of testing, quizzing, and other activities that force the learner to recall information are more effective for long term memory and automaticity (Karpicke & Rodiger, 2007).

Karpicke and Rodiger (2007) conducted studies with university students and found that retrieval after repeated testing used as a means of repeated practice had a greater impact on long term retrieval on a one-week delayed post-test, than traditional studying. They also conducted studies to show that additional learning after retrieval does not improve retention, while additional testing/retrieval after learning yields benefits. After learning and being tested on word pairs, upon getting items correct, students were either not taught the word again- but were tested on it, not tested on the word again- but were taught it, or not taught and not tested on the word again. Results indicated that as long as the group was repeatedly tested, their final recall was greater (Karpicke & Rodiger, 2007).

Nakata (2017) took this theory a step further and conducted a study to determine the long-term effects of “within-session repeated retrieval” on L2 vocabulary acquisition. The groups that used five and seven retrieval cycles during the learning session, had better retrieval at all post-tests than the groups using only one and three retrieval cycles.

In an attempt to prove that the more active and complex the learning the more effective the retrieval, Karpicke and Blunt (2011) conducted a study with 80 undergraduate students, who were assigned to four groups of increasingly detailed forms of study. On the initial post-test, students in the most complex form of input group and students in the retrieval group, who studied the material only once and then wrote down everything they

remembered, scored similarly. Interestingly, on the delayed post-test the retrieval practice group had the highest scores.

While only several studies are cited here, they would seem to indicate that having second language learners engage in activities that required them to retrieve information repeatedly, as opposed to using traditional studying formats, leads to better retention and automaticity. This aligns with the depth of processing theory used in vocabulary acquisition in an L2, which states that tasks involving greater cognitive load are more likely to be retained. However, of note is the fact that much of the study of automaticity is conducted at middle school, high school, and the university level. In an attempt to locate studies on automaticity in the elementary school classroom, two google scholar searches using the terms ‘meta-analysis and automaticity’

[[https://scholar.google.com/scholar?start=0&q=meta+analysis+and+automaticity+&hl=en&as\\_sdt=0,33&as\\_vis=1](https://scholar.google.com/scholar?start=0&q=meta+analysis+and+automaticity+&hl=en&as_sdt=0,33&as_vis=1)] and ‘meta-analysis and automaticity in elementary education’

[[https://scholar.google.com/scholar?q=meta+analysis+of+automaticity+in+elementary+schools&hl=en&as\\_sdt=0&as\\_vis=1&oi=scholar](https://scholar.google.com/scholar?q=meta+analysis+of+automaticity+in+elementary+schools&hl=en&as_sdt=0&as_vis=1&oi=scholar)] were conducted, yielding 34,300 results and 19,600 results respectively. Few studies if any combined automaticity and elementary age students. Several studies focused on one aspect or the other. One study emerged in both searches that contained both elements, meta-analysis and automaticity in elementary students; and both were specifically related to the study of math facts. One possible explanation for this could be the inherent difficulty in studying automaticity, an abstract process in the learner’s mind, in primary age children.

We have thus far explored a sampling of research on several practice methods and retrieval, and we now shift focus to the timing and spacing of such practice.

Researchers have looked at when repeated practice takes place and the effects of distributed practice versus massed practice on long term retrieval and automatization. Distributed practice occurs when studying is done over time at spaced intervals using short study sessions, while massed practice relies on studying in a more condensed time frame. The Spacing Effect, another name for distributed practice, has a greater impact on retention. While massed practice has benefits in the short term, for long term retention distributed practice is better (Kang, 2016). Thus, building in multiple opportunities for practice during the learning process should yield long term retention. The challenge therein is to find ways to make distributed practice engaging for students.

In addition to when to engage in repeated practice and what type of repeated practice is best to reach automaticity, researchers have also concluded that repeated practice is skill specific when it comes to automaticity (DeKeyser & Criado, 2012). In other words, if the skill practice was conducted using comprehension tasks (receptive language), the learned skills will not transfer to production tasks (expressive language) when at the level of automaticity. The same is true for the reverse: Skills practiced as production tasks, will not transfer to comprehension tasks (DeKeyser, 1996; DeKeyser, 1997; Rodgers, 2011). From this we can infer that the method used to teach language skills to the level of automaticity must encompass both components of language learning, production and comprehension.

Task-based repetition yields high levels of automaticity in an L2 (De Ridder, Vangehuchten, & Gomez, 2007). Building on the theory of task-based practice, DeKeyser and Criado (2012) posit that authentic practice will lead to the highest levels of automaticity, as they are closest to approximating real world experience in an L2. They theorize that practice should have a goal of working towards implicit, or incidental learning outside the

classroom setting. In many bilingual programs, students do not get enough consistent and intentional practice to internalize the language. “Systematic skill development” (p. 5) is not the same thing as tedious repetitive practice using isolated worksheets and random drills. Repeated practice for the sake of skill development should replicate real world experiences and focus on the communicative aspect of language. This increases motivation and transfer to real world use. DeKeyser and Criado stipulate that with children, teachers need to structure activities so that practice is developmentally appropriate, child centered, and inherently engaging.

Hulstijn (2002) adds to the idea of repeated practice taking the form of authentic tasks by highlighting the fact that there are other aspects that affect cognition that should not be ignored, such as motivation and emotion. These affect the learner’s ability to engage with the information and sustain a significant role in the learner’s ability to participate in the repeated practice necessary to reach automaticity. In the same vein, the social and cultural environment also impact the learner’s ability to proceduralize the declarative knowledge and practice it until it reaches automaticity.

The studies of De Ridder, Vangehuchten, and Gomez (2007), DeKeyser and Criado (2012), and Hulstijn (2002) focus on the need for authentic task-based activities as a means of repeated practice. Much like the theorists who advocate retrieval as a means of repeated practice, these researchers believe that the higher level of cognition and processing involved will lead to greater retention and therefore better automaticity. An additional element which is a precursor for achieving automaticity and fueling all student learning is student engagement, to which this review now turns its attention.

## **Student Engagement**

Student engagement (SE) plays a significant role in learning (Marks, 2000). For close to 80 years, researchers have studied the impact of student engagement and the best ways to measure it (Kuh, 2009). While the paradigm of student engagement has evolved over the years, from being merely a measurement of how much time the student spends on task to a more complex mix of dynamics, the benefits of student engagement have never been in doubt (Bundick, Quaglia, Corso & Haywood, 2014; Kuh, 2009; Marks, 2000).

An apt definition of SE might be "...the amount of curiosity and interest students display while learning" (Akers, 2017, p. 28). Initially, time on task was thought to be a viable measure of student engagement, but over time, researchers realized that SE was more complex than merely how much time was spent on an activity (Parsons, Nuland, Parsons, 2014). Fredricks, Blumenfeld, and Paris (2004) and Guthrie and Wigfield (2000) surmised that there are three forms of SE- affective or emotional engagement, behavioral engagement, and cognitive engagement. Affective refers to "a sense of belonging" (p. 24) and connectedness, curiosity or interest in the topic. Behavioral refers to active involvement or participation in the learning and the amount of time spent on the activity. Cognitive refers to persistence or determination, and the use of self-awareness techniques.

There are numerous documented benefits to fostering student engagement in the classroom such as increased academic achievement, improved test scores, better retention (Skinner & Pitzer, 2012); improved learner self-perception, improved outcomes on standardized tests, lower high-school drop-out rates and higher success rates in college, and overall success and satisfaction in life beyond schooling (Bundick, Quaglia, Corso & Haywood, 2014). While these outcomes are impressive in and of themselves, perhaps the



greater consequence is the more immediate effect SE has on the learner in the classroom. When students are engaged in a subject, they tend to feel more competent in that area, and therefore engage with the content further, thus creating a positive cycle of engagement which leads to more interaction with the content and thus better acquisition of the material (Bundick, Quaglia, Corso & Haywood, 2014). Marks (2000) adds that SE is a “growth producing activity” (p. 155), and that the more a student is engaged, the greater their self-concept will be a learner. As the student sees success, they will identify with that which precipitates the positive emotions about self, namely school, and will therefore come to view the school and learning in general as a positive, which will lead to life-long learning (Finn, 1989; Marks, 2000).

As the authors above have concluded, there are clearly long- and short-term benefits to creating an environment which supports a high level of SE. Several factors contribute to SE in the classroom (Marks, 2000). Bronfenbrenner (1979) states that students learn by paying attention to things in their environment which they find meaningful and entertaining. Designing instruction to include self-directed activities with high levels of student agency, and authentic learning experiences with relevance to students’ lives and interests will have the greatest bearing on SE (Bronfenbrenner, 1979; Bundick, Quaglia, Corso, & Haywood, 2014). Additionally, the work should be increasingly complex and challenging to continue the level of engagement (Bronfenbrenner, 1979). More recently, Csikszentmihalyi (1990) states that SE is affected by three features: the knowledge of how being engaged has helped them in other areas, their natural innate tendencies as children, and their belief that the learning activity will have a positive benefit to them in their future.

In a study measuring SE in math and social studies, involving 24 public schools in the United States, researchers found that across elementary, middle school, and high school, SE decreased as grade level increased. Seeking to explain this, researchers looked at several mediating factors and concluded that previous success in school and authentic work that was intellectually stimulating and connected to real world learning, positively affected the level of SE across all grade levels (Marks, 2000). Teachers need to create a caring classroom culture, establish clear rules and routines, and create a cooperative as opposed to competitive culture. However, it is the actual task assigned to students that has the greatest impact on SE. Engaging tasks are authentic, collaborative, have student agency, and the level of complexity and challenge is appropriate to the student (Parsons, Nuland, & Parsons, 2014).

Based on what we know from current research about the inherent complexity of SE, and its many benefits, it stands to reason that in designing any study measuring student learning outcomes, SE should be considered one of the necessary measures to assess the success of the learning intervention.

### **Theoretical Framework**

As discussed in the literature review, vocabulary plays a crucial role in second language acquisition (Barcroft, 2004). Bloomfield (1926), one of the founding fathers in the study of linguistics, laid the foundation for how we understand, interpret, and use language. Bloomfield's explanation begins with the smallest units of sound and progresses to the creation of words and then sentences to create meaningful interaction. Along the way, he highlights the importance that words and vocabulary play in the creation of language and meaning. Based on Krashen's theories on second language acquisition (1982), we know that facility with vocabulary in a second language is a crucial component for becoming proficient

in a second language. To support language facility, vocabulary acquisition must reach the level of automaticity, such that words are retrieved from memory without needing to attend to the process of retrieval (Samuels & Flor, 1997). Cognitive Load Theory (Sweller, 1988), Anderson's Adaptive Control of Thought Theory (1983, ACT) and Logan's Instance Theory of Automaticity (1988) posit that new information must move through a series of stages in the brain for new knowledge to become automatic. Once this occurs, the learner is open to process other tasks simultaneously, allowing for greater levels of learning. Reaching automaticity is accomplished through repeated practice, which is often described as rote and not stimulating (DeKeyser & Criado, 2012; Samuels & Flor, 1997).

Building on Bruner's theory of constructivist learning (1961) where the students must be actively engaged in the learning process, this study incorporates opportunities for active student participation. Bruner believed that the greater the activity level on the part of the student, the greater student achievement would be. Kolb's theory of experiential learning (1984) and Dewey's foundational work on childhood learning (1897) stipulate that play is the natural and preferred form of experiential learning for young children. Therefore, in this study, play in the form of Teacher Directed Games (TDGs) provides an ideal venue for repeated practice as it taps into children's innate nature, since it is engaging, autonomous, and simulates real world experience and use of language. This form of learning will hopefully have the added benefit of increasing student engagement. This is supported by Bronfenbrenner's (1979) theory, which proposed that students learn by paying attention to things in their environment which they find meaningful and entertaining. As we know, students who are more engaged, do better academically (Kuh, 2009).

## Chapter 4: Research Questions

This study explored using play as a means of systemization or automaticity of vocabulary in a second language and as a positive influence on student engagement and student learning outcomes, thus indicating that play is a valid means of repeated practice of vocabulary in a second language.

*Research Question 1: What effects will play as a means of systemization have on Hebrew vocabulary acquisition, student engagement and interest in Hebrew language learning, and on-task/off task behavior during Hebrew language lessons?*

Hypothesis 1a: Student engagement has been shown to have a positive effect on student learning outcomes (Rosenshine, 1983), and play has the capacity to promote active engagement (Dennis, 1970; Podolefsky, Rehn, & Perkins, 2013). Therefore, students who are engaged in the learning process through play, will have better retention of the material learned. They will score higher on a test of expressive Hebrew vocabulary after the intervention. Specifically, they will demonstrate a greater ability to name Hebrew vocabulary words based on pictures (i.e., content). They will also demonstrate a greater ability to properly gender masculine and feminine verbs (i.e., gender).

Hypothesis 1b: Students will also score higher on a test of receptive Hebrew vocabulary after the intervention. They will demonstrate a greater ability to give the correct English translation for a Hebrew word given orally (i.e., content). They will also demonstrate a greater ability to assign the proper gender to Hebrew verbs given orally (i.e., gender).

Hypothesis 1c: Several components of play, such as authenticity, and relevance to students' real lives, inspire students to be actively engaged (Dennis, 1970; Podolefsky, Rehn, & Perkins, 2013). Therefore, students will report higher levels of engagement and interest in Hebrew language learning after the intervention.

Hypothesis 1d: Students will engage in higher levels of on-task behavior during Hebrew language lessons during the intervention.

Hypothesis 1e: Students will engage in lower levels of off-task behavior during Hebrew language lessons during the intervention.

*Research Question 2: Will the effects of the intervention on Hebrew Vocabulary test scores be moderated by levels of student engagement and interest?*

Hypothesis 2a: The effects of the intervention on expressive language will depend on the student level of engagement, such that the intervention will be more effective for those who are more engaged and less effective for those who are less engaged.

Hypothesis 2b: The effects of the intervention on receptive language will depend on the student level of engagement, such that the intervention will be more effective for those who are more engaged and less effective for those who are less engaged.

## **Chapter 5: Method**

### **Participants**

A convenience sample of 40 first grade students was chosen. Students were enrolled at Bnos Malka Academy, an Orthodox Jewish girl's Yeshiva in Queens, NY. At the beginning of the study, students were between the ages of 5.10 and 6.9 years old, and received instruction in a dual language program, with either Hebrew in the morning and English in the afternoon, or vice versa. Half the students in the sample were in the Hebrew morning class, while the remaining students were in the afternoon Hebrew class. Both classes have the same Hebrew teacher and English teacher. Class composition was not based on socio-economic status (SES), age, or ability, as school policy is to have heterogenous grouping in each class. Class placement was determined solely by parent request and Kindergarten teacher recommendation. Bnos Malka Academy was chosen as a convenience sample, as the researcher works at the school and has access to the curriculum and the students.

Students at the school are representative of the Orthodox Jewish demographics of Queens and Long Island. The socio-economic status (SES) of the students ranges from low SES/free or reduced-price lunch to high SES. There was no attrition, as all students remained enrolled in the class throughout the duration of the study.

### **Measures**

The independent variable was intervention status (i.e., before and after). The dependent variables in this study were scores on a Hebrew Vocabulary test, self-reports of

engagement and interest in Hebrew language learning, and behavioral observations of engagement during Hebrew language learning. Informal interviews were used to provide a more robust understanding of students' self-perceptions of their engagement levels.

### ***Vocabulary Test***

One of the dependent variables was students' acquisition of Hebrew vocabulary. The purpose of the vocabulary test was to measure the amount of expressive and receptive language the student had acquired over the course of the intervention. For the purposes of this study, Hebrew vocabulary was limited to mostly verbs and corresponding nouns. In Hebrew morphology, in addition to the meaning of the root word, there are three inflectional additions that affect the understanding and use of the word, gender, number, and tense (Lustigman, 2007). Gender is a binary choice of male or female. Number refers to singular or plural, and tense can be either past, present, future, command, or the infinitive (verbs). Since all Hebrew vocabulary modules taught to the age group that participated in the study do not teach number or tense (all verbs are taught in present tense), it was decided to only assess students on the meaning of the root word and the gender used. Advanced grammar rules, such as plural, and complex sentences are beyond the scope of this study. The format for the test consisted of twenty items; ten for receptive language and ten for expressive language. Scores were calculated by getting the proportion of correct response, so scores could range from 0-1 on each item with a total score of 20 possible.

A mix of nouns and verbs were used for the vocabulary test. In module 3, students were tested on six verbs and four nouns for the receptive language segment, and four verbs and six nouns for the expressive language component. In module 4, students were tested on three verbs and six nouns for both the receptive and the expressive language parts of the test.

Words were chosen based on the vocabulary included in the module. Module 4 had less verbs being taught than Module 3 did, which is reflected in the greater number of verbs being assessed in Module 3.

For receptive language, the interviewer said a Hebrew vocabulary word and the student was asked to say the meaning of the word in English. For expressive language, the interviewer showed the student a picture, and the student was asked to say the word in Hebrew. As an example, for receptive language, the interviewer asked, “What is the meaning of the word, נוסעת (no-**sa**h-aht)?” The student could answer correctly by saying, “Travel for a girl”. Instructions for the vocabulary test, the training protocol for administering the vocabulary test, and the complete test are provided in Appendix A. Both expressive and receptive language items were scored for the accuracy of the content. Accuracy of gender was also scored for gendered verbs.

The pre-test was administered to participants after the third Hebrew module/unit of the year was completed. All Hebrew vocabulary instruction up to that point was completed in the traditional manner. Students were assessed on how well they mastered the key vocabulary words for that module. At the end of the fourth Hebrew module/unit of the year, which is when the introduction of TDG intervention took place, students were assessed again using the words from the fourth module.

### ***Self-Report of Student Engagement and Interest***

The purpose of the student self-report was to measure students’ self-perceptions of their engagement and interest while learning Hebrew. The student self-report was administered by an adult interviewer orally, one on one, as some of the words in the self-report were beyond the students’ reading level. Other pre-made self-engagement self-report



measures were not used as they were above the skill level of the students. In addition, it was impossible to locate published self-report scales for early elementary school age Hebrew language learning. Therefore, questions for the student survey were generated in consultations with a child clinical psychologist and a school social worker. The self-report measure was piloted on several children ages 4-7. Items were then modified to increase comprehension, resulting in the final 10-item measure used in the study. The student survey reflects the conceptual framework proposed by Guthrie and Wigfield (2000), in which student engagement consists of multiple domains, which are multifaceted in and of themselves (i.e., affective, behavioral, cognitive). Prior to the intervention, the student self-report was administered to students to assess their level of engagement with learning Hebrew language. The self-report was then administered again, after the intervention, so pre- and post-intervention results could be compared. Each question was scored on a four-point Likert scale, with 4 being the highest level of engagement. Scores from the ten items were then averaged to create an overall engagement score. The measure only had modest internal reliability (Time 1  $\alpha=.56$ ; Time 2  $\alpha=.56$ ).

To help reduce the effects of social desirability bias, questions were worded based on the Harter format, also known as the student self-perception profile (SSSP; 1985), and used a hierarchical format, so that each response to the initial question prompted a second level answer. On the first step students are presented with two options, one in which a hypothetical child is engaged with Hebrew language learning, and another where the child is less engaged with Hebrew language learning. The participant then selects "Which is more like you?" and after the target is selected and restated by the interviewer, the participant indicates if the

statement is “really true for you, or sort of true for you”. A copy of the student self-report with instructions and training protocol can be found in Appendix B.

### ***Behavioral Observation of Student Engagement***

The purpose of the behavioral observation is to measure student engagement in learning Hebrew language through adult observation of student behavior during the learning process. The tool is based on an on-task/off task behavioral observation tool created by Glickman, Gordon, Ross-Gordon, and Jovita (2010). The original tool only measured on task and off task behaviors in general, and is not nuanced enough to adequately measure the level of engagement this study seeks to ascertain. The observation tool was modified to include the current five behaviors, which include four types of on-task behaviors and one general off-task category. Categories include: F = focused on task; A = actively participating in the learning task; I = interacts with peers; P = pleasure/ enjoyment in task; and OT = off task. The observation tool was piloted on several students in various age groups, from age 4-7. A copy of the observation tool along with the corresponding instructions and the training protocol, including operationalization of the above behaviors, can be found in Appendix C.

Each on-task behavior, and the off- task behavior were operationalized in order to standardize assessment procedures. Examples of F = focused on task behaviors pre-intervention include looking at the teacher, while focused on task behaviors during intervention include engaging with peers and the activity. Examples of A= actively participating in the learning task during pre-intervention include participating in group responses, while an example of active participation during the intervention would be taking turns and participating with peers. An example of I= interacts with peers pre-intervention, would be joining with peers in choral responses, while an example during intervention would

be talking to peers and engaging them while using Hebrew vocabulary. An example of P=pleasure and enjoyment in task in both pre-intervention and during intervention is facial and body cues such as smiling and laughing. Finally, in the converse, examples of OT= off task behavior pre-intervention include calling out and fidgeting/playing with items in desk, while examples of off task behavior during intervention included not engaging with the activity/peers, bothering peers, and being involved in activities not intervention related. Each rater had ten to twelve target children identified for each testing and they assessed for the four on-task behaviors and off-task behavior every five minutes for the thirty-minute duration of the lesson. Therefore, each participant was given approximately a one-minute observation for each interval. Two groups of up to 20 students were rated on multiple days. Each child was rated on 3 or 4 days, to allow scores to be computed by averaging scores across days. Behaviors were rated as absent or present with absent being rated as a zero, and present being rated as a one. Prior to the intervention, students were observed during a Hebrew language lesson conducted in the regular format of the classroom. Students were observed again during the intervention and results were compared to determine changes from pre-intervention to intervention. A final on-task score was calculated by taking the total number of on-task behaviors observed, with higher scores reflecting greater on-task involvement. The same was true for off-task behavior.

### ***Interviews***

At the conclusion of the previous measures, students were interviewed using an informal interview format. Interviews were conducted as the final measure to ensure that student responses were not affected by social desirability bias. The researcher conducted

the interviews individually with each student, in a quiet room. Responses were audiotaped and later transcribed. Due to the complex nature of student engagement and the relatively young age of the students which could affect their metacognitive perceptions, it was decided that the use of informal interviews based on the original questions used in the student self-report may yield a more accurate representation of levels of engagement. The information gathered from the students informally was used as exploratory data to provide a more robust view of the effects of the intervention. Interview questions and student responses can be found in appendices D and E, respectively.

### **Procedures**

The study was conducted during the 2019-2020 school year, over the course of three months, from December through February. This study was given IRB exemption status since the intervention proposed involved using the same curriculum that would be taught under non-intervention circumstances. The only change is the method of presentation, which poses no harm or risk to students. Method of presentation is typically left to school personnel to decide and is not discussed with parents. Participants were initially administered pre-test measures, including a vocabulary test (for previous learning module), self-reports and behavioral observations of student engagement. The intervention is described below.

### ***Intervention***

For mastery in a second language, automaticity with the vocabulary of that language is required (Barcroft, 2004; Segalowitz, 1993). Often, the level of automaticity is reached through rote methods of repeated practice, which can be less than engaging for students (Bakhash, 2016; Hulstijn, 2002). To counter the lack of engagement due to rote activities, this study used age-appropriate games as a means of repeated practice. It was expected that

the use of games instead of rote work would engage students and lead to greater levels of vocabulary retention.

In both learning modules, students were first taught the new vocabulary words at the beginning of the module, using traditional methods. The teacher showed the class a picture of the word, said the word and had students repeat it. This was consistent across both modules and therefore did not impact the intervention or the results.

The games used in the intervention were games that students were familiar with, such as dress up dolls, Memory, and Bingo. The games were adapted to include key Hebrew vocabulary words from the fourth Hebrew module of the school's curriculum. Students needed to verbalize the word in Hebrew to be able to move their piece/complete the turn (expressive language) or give the definition of the word using proper masculine/feminine assignment (receptive language) to be able to move their piece/complete their turn. Samples of games and instructions for use can be found in Appendix D.

Games were introduced to students by the classroom teacher, who explained the rules of the game, how many students can play, and where the game would be stored when play is over. Students used the games during 'Independent work time' in place of engaging in the typical method of repeated practice, such as reviewing flashcards, used in the classroom. Independent work time took place three times a week for approximately thirty minutes each session for the duration of the module.

Technology and computer-based games were not included in this study, as the genre of computer gaming is vast and beyond the scope of this paper. It would also have introduced other elements into the study that might have affected the outcome, such as students' lack of

familiarity with computer-based gaming. Additionally, using computers and technology does not align with the values of the school and the parent body where the study was conducted.

All measures were administered during the third Hebrew module/unit of the year to assess students' mastery of key vocabulary from the module (given at the end of the module), self-reports of engagement, and behavioral observations of on-task behaviors. During the fourth module, students received the intervention and were once again assessed for self-reports and behavioral assessments of engagement and then given the final vocabulary test for the fourth module.

### **Power**

For the current study, a minimum of 80% power was desired, with an alpha of  $p < .05$ , 2-tailed. There is minimal research that quantitatively examines early elementary school Hebrew language engagement, therefore we estimated a medium effect size, which allows for relatively moderate, but not trivial effects to be detected. Utilizing G-power software (Faul, Erdfelder, & Buchner, 1996), in order to detect a medium effect size ( $d = .5$ ) a total of 33 participants would be needed to have adequate power. Therefore, a sample of 40 was deemed adequate to detect medium to large effects.

## Chapter 6: Results

All data were entered into SPSS statistical software and screened for any unusual, out of range, or extreme scores. Next, data was screened for univariate outliers and normality for the three continuous outcomes: self-report of student engagement, behavioral observation of student engagement, and vocabulary scores. For post-test results, both receptive and expressive language on the vocabulary test were mildly kurtotic and skewed. One outlier was found in the vocabulary test for expressive language content (ELC). Logarithmic transformations were applied to all non-normal variables, which did mildly improve the shape of the distributions. However, the pattern of results was nearly identical with both the raw and transformed data and with and without the outlier. Therefore, all analyses were reported with the raw variables, including the outlier because there was no perceptible difference in the pattern of results, which allowed for use of the original scaling and inclusion of the whole sample.

The study did not control for student outcomes. Since there was no perceptible reason to assume that other variables would have a significant impact on the results, students were not screened for the following: having an Individualized Education Services Program from the Department of Education, speaking Hebrew at home, education level of the parents, or home environment pertaining to parent involvement and game playing.

## Quantitative Data Results

### *Descriptive Statistics and Correlations*

Descriptive statistics are provided in Table 1 for all study variables at pre-test (T1) and post-test (T2), after the intervention was implemented.

**Table 1**

### *Descriptive Statistics for Vocabulary Scores and Self-Reports of Engagement*

| Variables                    | <i>M</i> | <i>SD</i> | Range |      |
|------------------------------|----------|-----------|-------|------|
|                              |          |           | Min   | Max  |
| T1 Self-Report of Engagment  | 3.39     | .39       | 2.50  | 4.00 |
| T2 Self-Report of Engagement | 3.41     | .42       | 2.20  | 4.00 |
| T1 Receptive Language C      | .80      | .26       | .10   | 1.00 |
| T2 Receptive Language C      | .89      | .17       | .40   | 1.00 |
| T1 Receptive Language G      | .80      | .27       | .00   | 1.00 |
| T2 Receptive Language G      | .81      | .26       | .00   | 1.00 |
| T1 Expressive Language C     | .67      | .25       | .10   | 1.00 |
| T2 Expressive Language C     | .86      | .21       | .10   | 1.00 |
| T1 Expressive Language G     | .79      | .28       | .00   | 1.00 |
| T2 Expressive Language G     | .79      | .31       | .00   | 1.00 |

Note. T1 = Time 1 pretest scores, T2 = Time 2 posttest scores, C = Content, G = Gender

Intercorrelations between the study variables were computed and are presented in Table 2. It should be noted that self-reports of engagement were relatively unrelated to



vocabulary test scores at both T1 and T2. Conversely, all four vocabulary scales were highly intercorrelated at T1 ( $r = .72-.87$ ). At T2 receptive language content was strongly correlated to the other three scales ( $r = .50-.70$ ) and expressive language content and expressive language gender were also highly correlated ( $r = .82$ ), but receptive language gender was more modestly correlated with expressive language content and gender ( $r = .18-.32$ ). Although receptive language gender was moderately stable over time ( $r = .37$ ), all other variables were highly stable ( $r = .59 - .81$ ).

**Table 2**

*Intercorrelations Between Vocabulary Scores and Self-Reports of Engagement at Time 1 and Time 2*

| Variable                       | 1           | 2             | 3           | 4             | 5             |
|--------------------------------|-------------|---------------|-------------|---------------|---------------|
| 1. Self-Report of Engagement   | <b>.59*</b> | .08           | .16         | .03           | .03**         |
| 2. Receptive Language Content  | -.02        | <b>.81***</b> | .34*        | .73***        | .55***        |
| 3. Receptive Language Gender   | -.06        | .87***        | <b>.37*</b> | .81***        | .67***        |
| 4. Expressive Language Content | .03         | .81***        | .76***      | <b>.66***</b> | .52**         |
| 5. Expressive Language Gender  | -.05        | .74***        | .72***      | .81***        | <b>.67***</b> |

Note. Data below diagonal are from Time 1 (pre-test); bolded data on diagonal represent stability coefficients; data above the diagonal are from Time 2 (post-test).

\* $p < .05$ . \*\*  $p < .01$ . \*\*\* $p < .001$ .

*Research Question 1: What effects will play as a means of systemization have on Hebrew vocabulary acquisition, student engagement and interest in Hebrew language learning, and on-task/off task behavior during Hebrew language lessons?*

Two t-tests for dependent means were run comparing T1 receptive language content (RLC) to T2 RLC, and T1 Receptive language gender (RLG) to T2 RLG. RLC scores were significantly higher after the intervention,  $t(40) = -2.916, p < .01$ . However, there were no significant changes in RLG,  $t(40) = -.261, p = .795$ . Two additional t-tests for dependent means were run comparing T1 expressive language content (ELC) to T2 ELC, and T1 expressive language gender (ELG) to T2 ELG. Once again, ELC scores were significantly higher after the intervention,  $t(40) = -5.976, p < .001$ . However, there were no significant changes in ELG,  $t(40) = -.053, p = .958$ . This suggests that the intervention may have positively influenced both receptive and expressive language content, but no changes were evident for receptive and expressive language gender, providing partial support for Hypotheses 1a and 1b.

Upon examining if receptive language skills were different than expressive language skills it was found that, at T1, RLC scores were significantly higher than ELC ( $t [40] = 5.581, p < .001$ ) but there were no significant differences between RLG and ELG ( $t[40] = .445, p = .659$ ). Upon examining if content abilities were different than gender abilities it was found that, at T1, ELG scores were significantly higher than ELC scores ( $t [40] = 4.510, p < .001$ ) but there were no significant differences between RLG and RLC ( $t[40] = .428, p = .671$ ). Thus, children tended to perform better on the receptive language task than on the expressive language task when identifying content. When examining the expressive language

tasks, they performed better when asked to produce the proper gender then when asked to produce the proper content.

To test if students had higher self-reports of engagement and interest in Hebrew language learning after the intervention, a t-test for dependent means was run comparing T1 self-reports to self-reports at T2. Self-reports of engagement and interest did not change significantly after the intervention,  $t(40) = -.467, p = .643$ . No support was found for Hypothesis 1c using the self-report measure, but interviews did suggest that many did like playing the games more, and will be discussed later.

Hypothesis 1d and 1e predicted that students would engage in higher levels of on-task behavior and lower levels of off-task behavior, as measured by behavioral observations during Hebrew language lessons during the intervention. While three raters conducted behavioral observations, only results from the two raters that were school staff were used. These raters were thought to have both a greater understanding of the children in their school and a stronger background in child development due to possessing advanced degrees and years of experience working with elementary age children in a school setting. The remaining rater was an undergraduate college student who did not have the same level of expertise and experience working with young students. Therefore, exploratory analyses were done using the primary raters to examine patterns of change. For each rater children were identified that they assessed at both T1 and T2. Rater 1 repeatedly assessed 23 children, while rater 2 repeatedly assessed 12 children. Scores on each of the four on-task behaviors and the one off-task behavior were compared using five t-test for dependent means. For both raters, children demonstrated a significant increase in interacting with peers and displays of pleasure and enjoyment and the effect sizes were very large (Cohen's  $d \geq 1.00$ ). There were no significant

changes in focused on-task, active participation, and off-task behaviors. See Table 3 for results.

**Table 3**

*Behavioral Observations of On-task and Off-task Behaviors by Two Independent Raters at Pre-test and During Intervention*

| Variable                  | T1 <i>M</i> | T2 <i>M</i> | $\Delta M$ | <i>t</i> | <i>df</i> |
|---------------------------|-------------|-------------|------------|----------|-----------|
| R1 Focused on Task        | 5.26        | 4.83        | -.44       | -1.31    | 22        |
| R2 Focused on Task        | 5.42        | 4.67        | -.75       | -1.95    | 11        |
| R1 Actively Participating | 5.00        | 4.57        | -.44       | -1.16    | 22        |
| R2 Actively Participating | 4.83        | 4.75        | -.08       | -.18     | 11        |
| R1 Interacts with Peers   | 2.00        | 4.48        | 2.48       | 6.58***  | 22        |
| R2 Interacts with Peers   | 1.67        | 3.83        | 2.17       | 3.68**   | 11        |
| R1 Pleasure and Enjoyment | .61         | 4.43        | 3.83       | 9.01***  | 22        |
| R2 Pleasure and Enjoyment | 1.25        | 4.08        | 2.83       | 3.48**   | 11        |
| R1 Off-task               | .52         | 1.04        | .52        | 1.86     | 22        |
| R2 Off-task               | .75         | 1.33        | .58        | 1.47     | 11        |

Note. R1 = T1 = Time 1 pretest scores, T2 = Time 2 posttest scores,  $\Delta M$  = mean change from T2 – T1, R1 = Rater 1, R2 = Rater 2.

\* $p < .05$ . \*\*  $p < .01$ . \*\*\* $p < .001$ .

*Research Question 2. Will the effects of the intervention on Hebrew Vocabulary test scores be moderated by levels of student engagement and interest?*

In order to test the interaction between Receptive Language (RL) skill level and self-reports of engagement on changes in RL skills two hierarchical multiple regressions were conducted. For the first multiple regression, the main effect of Receptive Language Content (RLC) at Time 1 and Student Engagement (SE) at Time 2 were entered in step one. Their product term was entered on step two to test for the interaction in predicting RLC at Time 2. The second multiple regression focused on Receptive Language Gender (RLC) at Time I and SE at Time 2.

In order to test the interaction between Expressive Language (EL) skill level and self-reports of engagement on changes in EL skills two hierarchical multiple regressions were conducted. For the first multiple regression, the main effect of Expressive Language Content (ELC) at Time 1 and Student Engagement (SE) at Time 2 were entered in step one. Their product term was entered on step two to test for the interaction in predicting ELC at Time 2. The second multiple regression focused on Expressive Language Gender (ELG) at Time I and SE at Time 2. Results of these four moderation analyses failed to support Hypotheses 2a and 2b ( $ps > .10$ ).

## **Qualitative Data Results**

### ***Informal Interviews***

Results for the informal interviews were determined by reviewing all student responses and grouping the data into common themes. The information gathered focused on students' self-perceptions of their levels of engagement using their own words. Many students professed to enjoying learning Hebrew language. They particularly enjoyed learning

using the TDGs but did not necessarily feel that it improved their learning. Student responses are discussed and analyzed in more depth in the discussion section. The questions used in the informal interviews and the complete transcription of the informal interviews can be found in Appendices E and F respectively.

## **Chapter 7: Discussion**

This study attempted to discover if the use of Teacher Directed Games (TDGs) in a first grade Judaic Studies classroom would increase Hebrew vocabulary acquisition and student engagement. Multiple measures were used including a vocabulary test, self-reports of student engagement, and behavioral observations of student engagement. Informal student interviews were conducted as well. Prior to the intervention students were given a pre-test on vocabulary from the third learning module of the year, took a self-report survey, and were observed by researchers. The intervention, practicing vocabulary through TDGs, was conducted during the fourth learning module, and students were reassessed using all three measures towards the end of the fourth module. Once these assessments were complete, students were asked interview questions in a semi-structured format.

Overall, vocabulary test results provided partial support for using TDGs to improve automaticity of vocabulary in a second language (L2). Results of the self-report on student engagement and interest in Hebrew language learning did not indicate a significant difference from Time 1 to Time 2. There was some evidence from the behavioral observations that peer interactions and pleasure and enjoyment increased during the intervention. Results from the informal interviews indicated that many students liked using TDGs to learn Hebrew.

Results of the vocabulary test partially supported the first research question and hypothesis 1a, that children will retain more Hebrew vocabulary in expressive language, the ability to name Hebrew vocabulary based on a picture, and hypothesis 1b, receptive language, the ability to translate the spoken Hebrew vocabulary into English. Specifically,

vocabulary test scores increased in the area of content (the correct translation of the word) in both receptive and expressive language from Time 1 to Time 2. However, in relation to providing the proper gender for verbs, there was no perceptible increase in vocabulary test scores in both receptive and expressive language. Thus, hypothesis 1a and 1b proved to be true for both expressive and receptive language respectively, but only in the area relating to the meaning of the word. Improvements in vocabulary knowledge in the area relating to identifying the correct gender of the verbs was not found.

When students are engaged in active learning, such as during play, they are primed for greater learning outcomes (Podolefsky, Rehn, & Perkins, 2013; Rosenshine, 1983). While students were playing during the intervention and using the TDGs, they may not have been aware that they were engaging in repeated practice of new vocabulary. As we know, when students participate in an authentic activity that is relevant to them, fun to engage with, and provides the opportunity for student agency, they will be more engaged (Hung, Tan, and Koh, 2006; Parsons, Nuland, and Parsons, 2014). Thus, through the students' repeated practice of the vocabulary through TDGs, it would seem that students improved their recall of the new vocabulary. A possible explanation for the disparity between content and gender could be that learning verbs (gender was only assessed in relation to verbs, not nouns) is more difficult than learning nouns, since nouns are generally acquired first (Gentner, 1982). Developmentally, it may be more difficult for young children to learn verbs and their applicable rules, than it is to learn nouns, as it requires more of the student in terms of attending to nuances, and complex and higher order thinking.

Supplemental analyses were done to see if there were any initial differences in the ability to learn expressive language and receptive language. Although there were no



differences in receptive and expressive skills for gender, receptive language skills started higher than expressive language skills for content suggesting that students' receptive language skills may be stronger than their expressive language skills, when it comes to remembering the content of words. This is one of the reasons that the expressive and receptive language scores were not combined when analyzing the data, since it was expected that they would generally be more skilled in understanding the content of Hebrew words, compared to generating Hebrew words (expressive language). Similarly, scores for content and gender were kept separate as it was expected that results might not be the same because gender assignment is harder for young children to attain than it is for them to attain content (Bloom, 1974).

Supplemental analyses were also conducted to see if there were any initial differences in the ability to learn content or gender. Interestingly, although there were no differences in receptive language for gender and content, expressive language for gender was better than expressive language for content. This result was not expected given that it is often easier to learn content than it is to learn gender (Bloom, 1974). Perhaps changing the suffix of a word when identifying gender is easier than having to generate a completely new word (i.e., the content). However, these two sets of supplementary analyses had no a priori hypotheses and were just exploratory in nature.

When analyzing the results of the vocabulary test, both where the students had difficulty and where they were successful, some patterns emerged. For example, students improved largely in content in both receptive and expressive language. This can imply that in the classroom setting, students are more equipped in the area of learning content versus learning gender. From Time 1 to Time 2, students improved only marginally in receptive

language for gender, and in expressive language for gender, their scores remained unchanged. Given that students did not make any progress in gender, we can infer that in the classroom setting we need to place more emphasis on teaching the gender of verbs.

For hypothesis 1c regarding improvements in self-reports of engagement, the findings did not support the hypothesis. The means for the student self-reports increased from 3.39 at Time 1, to 3.41 at Time 2, suggesting they were in the positive direction but not large enough to be significant.

Issues with the measurement tool may have had an impact on supporting Hypothesis 1c. An evaluation of the internal consistency of the measure revealed an alpha of .56, whereas  $\alpha = .70$  or greater would have been ideal to show adequate internal consistency. Lower internal consistency can sometimes mask actual effects. In addition to the fact that the measure didn't quite meet the standard for internal reliability, there may have been some concerns about the validity of the measure. Mainly, did the measure accurately capture the construct of engagement and were the students able to fully understand the questions? Since a pre-existing measure that would gauge the complexities of student engagement in young children including the affective/emotional, behavioral, and cognitive domains was not located, a measure specific to the needs of this study was designed. Several methods were employed to compensate for this: It was based on an existing measure and used the Harter method (Harter, 1985) which was intended for use with young children and is thought to reduce social desirability bias by presenting the more socially desirable and less desirable responses as acceptable options, it was piloted on children of a similar age and then revised for simpler wording, and it was created in consultation with a school social worker and a child clinical psychologist. Even with these safeguards in place, the possibility exists that the

measure was not sound enough to gauge the intricacies of an abstract concept such as student engagement in young children.

Another explanation could be related to comprehension. It is possible that the nature and format of the self-report measure was beyond the comprehension level of the students. While the Harter method is an established and validated method to use with young children, perhaps it provided too many choices, which was overwhelming, confusing or beyond the comprehension level of the students. Either the wording was too complex, or students were not able to relate or put words to the concepts being measured. It is also possible that while great care was taken to align each question to one of the three domains of student engagement, affective/emotional, behavioral, and cognitive, it could be that the questions were monitoring more than one construct, especially since there is considerable overlap among the three domains.

An additional theory as to why the self-reports did not show a greater increase in engagement from Time 1 to Time 2 could be the length of the intervention, which only lasted three to four weeks. It is possible that students did not have enough time to adjust and become familiar with the new style of learning and reviewing presented in the intervention. Perhaps with more exposure and more time to get comfortable with the new method of learning, students would have reported greater engagement and interest on the self-report.

Finally, a lack of metacognitive abilities on the part of the young students may have contributed to the lack of results on the self-report of student engagement as students at this young age may not have enough self-awareness of their own level of engagement (Schraw & Moshman, 1995). Also, this measure may not have directly tapped into the construct of fun, which was sometimes mentioned in the interviews, and may be the best indicator of

engagement for children this age. As a concluding thought, since the level of change in student engagement measured by the self-report was so small, perhaps the students themselves did not register the changes in their own engagement.

The intervention behaviors measured during the behavioral observation were derived from the literature about the nature of play, language learning, and engagement. These include active learning, a high level of interest and attention, pleasure and enjoyment in the task, interaction with others, and a lack of interest in things in the environment not pertaining to play (Fung & Cheng, 201; Hirsh-Pasek & Golinkoff, 2008; Taylor & Parsons, 2011). In numerous studies, students were observed to lose track of time, and ignore environmental distractions when engaged in play. However, these behaviors are not emphasized in frontal instruction. Therefore, when comparing the above behaviors in a traditional lecture/frontal style lesson to a more play-centric style of learning as seen in the intervention, the behaviors do not align descriptively. An example of how frontal teaching and play are different conceptually is shown in the post-intervention behaviors of “absorbed in the activity to the point of ignoring distractors” or “seems to lose track of time while engaged in the activity” or “taking turns and participating with peers.” These are key indicators of play engagement but might not be assumed during lecture/frontal teaching, even when asked to respond to a teacher inquiry. Future studies could try to make the language of the behaviors being observed more comparable.

In another example of the possible misalignment of how on-task and off-task behaviors differed from pre-intervention to intervention, student behaviors for focused and on task during the pre-intervention observation included “looking at the teacher when appropriate, listening to and following directions, and completing the stated activity”, while

during the intervention, the same focused and on task behaviors took a different form and were operationalized as “using Hebrew vocabulary as part of the activity, completing the activity, and engaging with peers during the activity”. Looking at the teacher when appropriate is a much easier task than actively utilizing vocabulary during a game. In addition, it is only possible to utilize vocabulary during the game when it is the child’s turn, but looking at the teacher while they teach at the front of the class can occur whenever the teacher is the focus of attention, which is often most of the time in a traditional frontal lesson, and does not necessarily indicate the student is actively or cognitively focused on the task. It represents that at a minimum, the student is visually oriented to the teacher. A more comparable item for during the intervention might have been “utilizing Hebrew vocabulary as part of the activity, when appropriate, or looking at the classmate who is speaking.”

Finally, behavioral observation of an internal process as subjective as student engagement presents many challenges. Although being engaged as a learner has observable behaviors related to it, a student will sometimes display several opposing behaviors within the span of one observation cycle, making it difficult to determine whether the student is truly engaged or not. Data shows that while one researcher classified a behavior as on task, the second and third sometimes viewed the same behavior as not on task. Thus, since comparing the on-task and off-task behaviors is so complex and nuanced, more formal practice using the measure might have been advantageous. The behavioral observations used in this study were theoretically based and created to address the complex nature of student engagement, which encompasses affective/emotional, cognitive, and behavioral domains (Guthrie & Wigfield, 2000). Previously published observational scales do not delve into enough detail nor do they parse apart the intricacies of student engagement as this study

sought to do. Future studies in this area will likely need to operationalize the observed behaviors more explicitly and conduct more comprehensive training for observers.

For the first rater there was evidence of a significant increase in interacting with peers, and in pleasure and enjoyment in learning. To verify this finding, data from a second observer/rater was assessed, with results showing similar significant gains in the same two behavioral observation measures. These observers were chosen as they are both trained in working with primary age students and are familiar with child development theory and developmentally appropriate practice. The changes in interacting with peers and in pleasure and enjoyment were not surprising given that TDGs are meant to facilitate peer interactions. Additionally, only the behavior of pleasure and enjoyment in task was measured using the same constructs for T1 and T2, which may have allowed for more valid comparisons; observers were able to accurately assess specific changes that were highly visible (e.g., smiling and laughing, excitement and animation, eagerness to participate), a change that was similarly reflected in many of the child interviews. Since significant increases were found in the behavior of pleasure and enjoyment in task, perhaps due to assessing the exact same observable behaviors at T1 and T2, it is conceivable that if the other measures on the behavioral observation had similar consistent wording, they would have displayed significant increases as well.

Specific patterns were found for the behavior, interacts with peers and the behavior, pleasure and enjoyment in task. Students were observed over the course of six intervals during each observation cycle. The four on-task and one off-task behaviors were rated as absent or present with absent being rated as a zero, and present being rated as a one. Then, the total number of zeros and ones were calculated for both T1 and T2, with T1 totals being

subtracted from T2 to obtain the difference in scores. The range of possible scores was 0-6. For the behavior, interacting with peers, of the 22 students observed by the first rater, students went from an average of 2 times at T1 to an average of 4.5 times at T2, indicating that results increased by close to 2.5 times from T1 to T2. For the second rater, of the 11 students observed, results increased from an average of 1.6 times to an average of 3.8 times at T2, indicating a jump of 2.2 times from T1 to T2. For the behavior, pleasure and enjoyment in the task, there was a significant increase in what rater one and rater two observed. During rater one's observations, students went from an average of .6 in pleasure and enjoyment to 4.4, indicating an increase of almost 4 times as much from T1 to T2. In rater two's observations, students went from an average of 1.25 to an average of 4.08, which is an increase of 3 times greater from T1 to T2.

For the behaviors, focused on task, actively participating in the learning task, and off-task, there were no significant changes, and the minor changes that were observed went in the wrong direction. Perhaps the same increases were not observed in these three behaviors because of measurement issues related to the difference in operationalization between T1 and T2.

Perhaps one of the reasons the concept of student engagement is often measured qualitatively is because engagement during play actually looks different than engagement during traditional teaching. Qualitative descriptions might provide the richest information. Skill on a test, such as vocabulary or self-reports of engagement and interest may be better quantitative measures to compare before and after, because the items don't need to change to fit the learning modality. This could be used in future research as a support for measuring student engagement qualitatively. Additionally, in future studies behaviors being observed

could be categorized into qualitative and quantitative categories based on whether or not the items change to fit the learning modality. Alternatively, future studies can focus on one construct of engagement that is easily observable, such as staying on task.

Research suggests that students/participants who are more engaged in an intervention will see greater benefits from the intervention (Halif, Hassan, Sumardi, et al, 2020; Hofkens & Ruzek, 2019). This concept has been well established and documented in bullying prevention programs, where students who were more engaged experienced greater rates of success with the intended intervention (Edmondson & Hoover, 2008; Low, Van Ryzen, Brown, et al, 2014). Thus, it is a reasonable assumption that students who experienced higher levels of engagement during this intervention would see higher vocabulary test scores at Time 2.

To ascertain the effect of student engagement on the success of the intervention, changes in vocabulary test scores were examined in light of the level of student engagement. Analyses failed to find that level of engagement and interest in Hebrew language learning during the intervention moderated the effectiveness of intervention on vocabulary acquisition. Thus, no support was found for research question 2 and hypotheses 2a and 2b. Some possible speculations as to why results did not support the connection between student engagement and the intervention's efficacy on vocabulary test scores could be due to power issues, as it may have been hard to detect only modest interaction effects. Another point to consider is that self-reports of interest and engagement at Time 1 and Time 2 were nearly identical, both in terms of average scores and amount of variability. It was assumed that some children would have higher self-reports of engagement and interest in Hebrew language learning during the intervention, and that those children would reap the most benefits. Given



that not only did students fail to increase in mean levels, but also had a similar standard deviation, there did not seem to be a subset of children who pulled ahead in how interested they were in Hebrew language learning to become more proficient learners.

When comparing two of the methods used to measure student engagement, the results of the informal interview did not parallel the results of the self-reports. While the self-reports barely registered an increase in student engagement and interest in Hebrew language learning, the informal interviews suggest that students were highly motivated when using TDGs. To account for this discrepancy, it is worth considering that students responded better to open ended questions where they were free to express their understanding of their own self-engagement better than with the pre-worded stems used in the self-reports. Again, this could point to the conclusion that the self-report measure was too complex or did not tap into the constructs children found most salient. Another point worth considering is that the wording of the questions on the self-report pertained to enjoyment of learning Hebrew language. Students did seem to sustain a significant increase of their enjoyment in the learning activity, but this did not necessarily translate to their enjoyment of learning Hebrew language in general.

On the informal interviews, the majority of students indicated that they enjoy and even love learning Hebrew. This could be due to a positive response bias, as few were able to explain why they love learning Hebrew. Almost all students interviewed, professed to enjoy using games to learn. However, when asked if they felt it helped them learn better, many responded in the negative, despite actually showing improvements in two of the four vocabulary test categories. Several students seemed to feel that they focused more on playing the game than the use of Hebrew language and that the 'fun' distracted them from the

learning. Student #39 said that learning is better without games because you have to work harder to learn the material, essentially, “we figure it out for ourselves”. She may be referring to the repetition or repeated practice this intervention focused on. This however, could support DeKeyser and Criado’s (2012) theory that implicit learning is most effective in vocabulary acquisition, and based on student responses it would seem that they were unaware that they were learning since it was not typical instructional time. Student #9 said, “Because playing games are when you play games with them and learning is when you sit and learn.” Many students responded that they preferred game playing to traditional learning because it is better than sitting in one place and ‘being bored’ or just listening, as student #35 said, “because you play it and don’t learn it”.

Student #34 commented that playing games was a reprieve to the repetitiveness of language learning to the point of automaticity, and not wanting to “*learn it again*”. Student #39 distinguished between learning and playing thusly: “*We learn and we play.*” When prompted with, “And usually with Morah [*the teacher* in Hebrew vernacular] what happens?” she responded, “*We learn.*” Student #29 expressed, “*When you play a game it’s not like learning.*” Clearly, the students are able to note the difference between play and traditional learning formats, and the concept of uniting the two is a foreign idea since they have not thus far been exposed to this type of learning when learning Hebrew.

Students were clearly engaged in the game playing as part of repeated vocabulary practice, as evidenced by their responses to question #6 (*Did you like playing Hebrew games? Why?*). Some students professed to be so engaged in the play aspect that they were not paying attention to the vocabulary words. Again, this might support DeKeyser and Criado’s (2012) concept of implicit learning, but it could also be due to the fact that this was

students' first exposure to TDGs and the novelty of practicing vocabulary this way would wear off eventually.

For students who were intrinsically motivated, they tended to be naturally engaged in the process and challenge of learning something new, and thus enjoyed learning new Hebrew words. Student agency, social interaction with friends, and the fun of playing games, were themes that populated a large portion of the responses by students. For example, several students mentioned that they enjoyed being able to interact with peers while learning during the intervention. Other students were able to express that they appreciated the student agency provided to them by playing games, as Student #13 indicated "Morah is not telling you what to do."

Many students admitted that playing the games made the learning fun. In fact, the word 'fun' came up frequently, in almost every response. This suggests that play is significant for the students; it is familiar to them and they enjoy it. However, the fact that many students could not explain in more depth *why* they liked/disliked the play, may indicate that students may be too young to be aware of why they like or dislike something, or that they do not have the words to express it. Additionally, it would seem from many of the responses that students were not truly aware of *how* they learn, as metacognition may not be developed highly enough at this age. One very self-aware student said, "*When you play the game you repeat it again and again and again.*" When prompted with, "How did that help you know the words?" the student responded, "*Because when you repeat the words you know it better*" (student #30).

Several students noted that they felt playing games was not helpful for them in learning new Hebrew language words. In response to why this may be, student #6 said,

“Because Morah teaches. She does it more. She like, writes it on the board and like, explains what she is doing.” This type of learning presents a more structured and explicit approach to instruction, and it is possible that some students learn better with explicit and direct instruction as opposed to repeated review through play. Often, ‘I don’t know’ and/or head shrugging was the preferred response. It is worthwhile to attempt to determine why that occurred. Was the language used in the questions too difficult or vague for the students to elicit better responses or did too much time elapse between the intervention and gauging students’ responses to the experience? These are questions which could be addressed in further studies. The findings from the informal interviews support the hypothesis that TDGs can foster higher levels of engagement. While the informal interview responses did not map on to each measure, it did overlap with results from the behavioral observation in relation to enjoyment and pleasure in task. Many students professed during the informal interviews that their enjoyment and pleasure in learning did increase. Additionally, previous studies highlight that stronger levels of student engagement lead to greater academic gains (Rosenshine, 1983) and evidence from the vocabulary tests supports the notion that students’ vocabulary scores did tend to increase.

On the objective measure, the vocabulary test, students did better in two of the four measures, receptive and expressive language in the construct of content. Finally, the behavioral observation showed that their level of enjoyment improved (along with peer interactions) and while that did not necessarily indicate a global attitudinal change towards Hebrew language learning, it did partially support the original hypothesis. Perhaps if the intervention had lasted longer than a few short months, students would have become more accustomed to learning through TDGs and would have come to associate increased pleasure

and enjoyment in the learning process with increased engagement and interest in learning Hebrew language.

### **Strengths, Limitations, and Future Studies**

The key findings of this study support the concept of using TDGs to improve student engagement in learning vocabulary in a second language. It also supports the idea that using TDGs improves students' vocabulary acquisition in a second language. These are important understandings as they can positively impact the way JDSs teach Hebrew language, a core tenet of the Jewish religion and the JDSs' curriculum. Over the course of this study, students' vocabulary scores increased, as did their level of engagement in the learning. This is a positive outcome that can serve as a starting point for future studies in these areas. Further investigations in these domains could look at more complex language structures, second language learning in middle school and high school, and the benefits and pitfalls of using qualitative versus quantitative measures to assess outcomes.

Overall, there were several strengths in the current study. First, the study used four methods of assessment, an objective vocabulary test, a subjective self-report of students' perceptions of engagement and interest in Hebrew Language Learning, a behavioral observation of engagement, reflecting on-task and off-task behaviors, and informal student interviews. Mixed method studies are extremely useful for presenting various perspectives on a topic and it provides a more robust view of the topic being studied (Creswell, 2003). This study attempted to capture the different aspects of the domains being studied. Objective measures like the vocabulary test looked at factual knowledge. The behavioral observation assessed behavior-based changes. The self-report and informal interview focused on self-perceived changes, although the informal interviews added a more nuanced look at self-

perception of engagement. Each measure tried to tap into a different aspect of the constructs being studied. Three of the measures corresponded to each other, results from the vocabulary tests, behavioral observations in the areas of pleasure and enjoyment in learning and interaction with peers, and informal interviews, indicating that the use of a mixed methods approach was successful in providing a more well-rounded view of the effects of the intervention. The self-report may have had too high of a cognitive load for students for it to be useful in this study.

Second, the current study had a high level of feasibility, as it was easy to implement in an authentic learning environment, the classroom, it did not present a challenge to the teacher to incorporate the intervention, and the students seemed to like it as well. Third, this study utilized primary age students as a sample. A good portion of the existing studies focus on high school or university level students, and there are relatively few studies that explore L2 learning using students this young. Fourth, on the objective measure of the vocabulary test, students showed significant increase in their vocabulary scores. Finally, there was evidence of positive effects on student learning outcomes, and students seemed to like learning using this alternative approach, as evidenced by data from the behavioral observations and students' informal interviews. This provides a model for how other schools can implement replications of this methodology in their school settings.

Based on some of the strengths of this study, schools might consider employing teacher directed games as the ease of implementation, and the enjoyable atmosphere for learning can only serve to enhance the learning environment. While only partial support was found, this study could provide a 'recipe' for best practice of L2 instruction in younger grades. Often, when teachers attempt to make learning fun and exciting, the activity itself

ends up distracting from the learning. This study provides a formula for how to make learning engaging and enjoyable for students and yet still maintain the level of learning.

There are several limitations pertaining to the design of this study which could affect the ability of the results to be generalized to other settings. The sample size of the study was limited to the number of students in the first grade of the school that participated in the study, Bnos Malka Academy. To account for the small sample size, both classes received the intervention, meaning there was no control group in this study. The lack of a control group necessitated the use of a repeated measures design, which while it has a high degree of power, may still not have been enough to compensate for the small sample size. Without a control group it is hard to demonstrate that the results obtained can be credited solely to the intervention, without other variables affecting it such as maturation or the passage of time. Furthermore, at the outset of the study, it was assumed that results might show at least medium effect sizes. However, there was not enough power to detect small effects. Future studies using a larger sample size could provide enough power for identifying even small effects and allow for random assignment to control and experimental groups, making the study truly experimental, to allow for greater evidence of causality. Another possible option could be using a lagged intervention in several schools, which could better demonstrate causality, because the schools “lagging” behind could be used as control groups until they receive the intervention.

Since this was a small-scale study, it did not control for student variables such as speaking Hebrew at home, education or socio-economic level of parents, parents’ engagement in play and games with their children at home, and other such variables. Due to the lack of power in this study, creating subgroups and adding additional covariates was not

an option, as this would have reduced the number of students in the overall group and negatively influenced the outcome. Additionally, any findings from these subgroups would not be generalizable since the subgroups would only consist of a few students and results would not be meaningful. Future and more robust studies containing a significant sample size could add additional covariates or subgroups.

The vocabulary words selected for this study may also have played a determining role in the outcome of this study. The words came from the established curriculum of the participating school and were not chosen for linguistic or morphological appropriateness or ease of study. There may be other Hebrew vocabulary words that are easier to acquire as a beginning learner of Hebrew as an L2. Using knowledge of the morphological construct of Hebrew to select the vocabulary words used in this study may have yielded different results. Furthermore, because of the repeated measure design, the actual words changed from time 1 to time 2, it is difficult to determine if they were equal in difficulty. By expanding the sample and utilizing an experimental group, this problem could be avoided.

Considering the difficulties with one of the measures used, it might be useful to try alternate measures in future studies. For example, the self-report of student engagement could utilize a more simplified format. The measure was specifically designed to account for social desirability bias since young students will naturally seek to please and give a positive answer. However, this format may have been too overwhelming for students and using a further simplified version may have yielded different results. A good way to compensate for easier wording and still keep social desirability responses in check would be to include distractors in the self-report measure. Using questions such as, ‘Do you enjoy recess?’ or ‘Do you like eating vegetables at lunch?’ might help make the focus of the survey less obvious



and help control for bias in students' responses. Another factor to consider may be whether the items on the self-report closely mirrored the language of the students. By using information from the qualitative interviews, it may be easier to assess engagement in their terms. Moving forward, it might be better to conduct the qualitative interviews first and then base the quantitative measures on material garnered from the interviews.

The other measure that presented problems was the behavioral observation of student engagement. This study sought to bring a new level of measurement to this topic by introducing a behavioral observation which could then be coded and analyzed. However, upon reflection, it would seem that perhaps previous researchers relied on qualitative measures since they understood that the nature of student engagement is difficult to capture in any concrete and definitive behavioral terms and that what is considered on-task or of-task may change as the learning activity changes from a traditional frontal lesson to play based learning. Therefore, future studies, if not able to construct an improved student observation tool might continue to use agreed upon measures such as student and teacher interviews to gather data.

A positive by-product of the behavioral observation is that the measure could serve as a starting point for the creation of a viable behavioral observation measure of student engagement geared towards younger students learning in an L2 classroom. By determining what did not work this time due to misalignment of wording of observed behaviors, and then revising and re-piloting the measure, a useful tool could be designed for future studies in the field.

Extending this study further could lead in several different directions. The same concept of play as a means of systemization could be applied to other areas of second

language acquisition, such as grammar, syntax, morphology, and more advanced areas of expressive and receptive language. Results of this study could be used to garner support and buy-in from stakeholders about the importance of incorporating play/TDGs into primary grade second language learning. Future studies could begin by exploring stakeholders' attitudes towards play in the primary grades, in JDSs. It would be helpful to have a solid knowledge of what parents, students, teachers, and administrators think and believe about the role that play should have in primary classrooms. This information could be used to address potential barriers to implanting play in L2 classrooms. Once this information has been gathered, studies could look at older primary age students, such as second, third, and fourth graders studying second languages, or other student samples, such as co-ed classrooms, to see if play in the form of TDGs as a means of systemization yields similar results. Older students may also be able to communicate their level of engagement more effectively.

Furthermore, it would be interesting to extend this study into middle school and high school. Skills practice will always be a necessary part of learning and finding alternate engaging forms of review and practice are pertinent to all grade levels. As students in high school are more advanced thinkers and are capable of abstract and inductive and deductive reasoning, in addition to using TDGs for review, they could also be part of the game-making process. This would afford them a higher level of cognitive input while working with the material and could therefore lead to greater retention. A note of caution though, TDGs are best suited to the repetitive and systematic practice of skills as opposed to concepts. While it is possible to apply TDGs to conceptual learning, more thought needs to be put into the construction of the learning activity.

## **Anticipated Contributions and Implications**

This study attempted to answer the question of how TDGs as a means of systemization of vocabulary affects student engagement and second language vocabulary acquisition. Results suggested that the use of play for repeated practice has a positive effect on vocabulary acquisition in an L2. These results highlight how taking the mundane task of rote vocabulary practice and making it engaging to students through play, can have a positive impact on their ability to progress in second language acquisition. The use of TDGs may be able to enhance retention and prove to be more enjoyable and developmentally appropriate for young students. This information will be useful to Jewish day school educators, both teachers and administrators, and other educators who teach a second language to primary age students, in a dual language program. Rethinking how we present repeated practice to young students may have a beneficial effect on their second language learning and could change the nature of instruction in L2 programs.

Specifically in the area of Jewish education, increasing students' knowledge of Hebrew language is critical, since being able to use the language with facility is fundamental to being a practicing modern orthodox Jew (Cashman, 2016). Ensuring that students are engaged in the repeated practice necessary for automaticity is not just a matter of improving vocabulary; it is integral to the students' spiritual growth and belonging as part of the Jewish nation.

One of the major accomplishments of this study is that it was conducted in a real-world setting, as opposed to a contrived or laboratory setting. Often, studies conducted outside the classroom obtain results that are difficult to transfer to the real-life environment of a school. The results yielded by the vocabulary test are measures that are used in

classrooms on a regular basis; real test scores are how progress is truly monitored in a school setting. The study itself was not difficult to implement in the classroom setting and did not pose a burden on the educational staff or the students. Students had a positive experience and were eager to participate and share their thoughts. This strongly suggests that the intervention used in this study can be replicated in other JDSs and should be encouraged so that students everywhere reap the benefits of play as a means of acquiring a second language. Considering that Hebrew language learning is such a vital and fundamental aspect of the educational and religious goals of JDSs, this foray into learning through TDGs may be particularly useful in helping JDSs reach their objectives.

In the long-term, there are benefits as well. As students get older and eschew the pedagogical techniques they have been exposed to repeatedly, TDGs could help ameliorate the boredom sometimes attributed to middle and high school students. In fact, in older grades, creating TDGs could be a hybrid effort between teachers and students which would create more student buy-in, excitement, and engagement. In all grades, TDGs may provide the added benefit of providing an appropriate learning tool for small groups and differentiation.

Finally, a love of learning is something we try to instill in young children. Although we often design the physical environment and the level of the material in accordance with developmentally appropriate practice, perhaps if we made the actual learning process more in tune with how young children often explore their environment, for example through play, we can not only effect better learning outcomes, but we can also help create a more positive connection to classroom learning and second language learning in particular.

## Appendices

### Appendix A

#### Copy of Vocabulary Test; Training Protocol

##### Vocabulary Test- Module III- Receptive Language

Directions: Explain to student that you will be saying a word in Hebrew that they have recently learned. Remind students that it is OK to say 'I don't remember'. Begin with an easy sample word. Ask each word and wait for student response. For verbs, student must give proper gender as well (i.e., יושב is sit for a boy). Sample: ילד (boy)

Student ID \_\_\_\_\_

- |     |                        |                        |       |
|-----|------------------------|------------------------|-------|
| 1.  | משחק (meh-sah-chek)    | [to] play (boy)        | _____ |
| 2.  | נרות (nai-rote)        | candles(plural)        | _____ |
| 3.  | מתנה (ma-tuh-nuh)      | gift/present           | _____ |
| 4.  | נותנת (no-ten-et)      | [to] give (girl)       | _____ |
| 5.  | שם (sum)               | [to] put (boy)         | _____ |
| 6.  | אוהבת (oh-hev-et)      | [to] like/love (girls) | _____ |
| 7.  | מדליק (mahd-leek)      | [to] light (boy)       | _____ |
| 8.  | שרה (shuh-ruh)         | [to] sing (girl)       | _____ |
| 9.  | לביבות (le-vee-vote)   | potato latkes (plural) | _____ |
| 10. | שמן זית (shemen zayit) | olive oil              | _____ |

## Vocabulary Test- Module III- Expressive Language

Directions: Explain to student that you will be showing them a picture that corresponds to a word they have recently learned. Remind students that it is OK to say 'I don't remember'. Begin with an easy sample picture. Show each picture and wait for student response. For verbs, student must give proper gender as well (i.e., יושב is sit for a boy).

Student ID \_\_\_\_\_

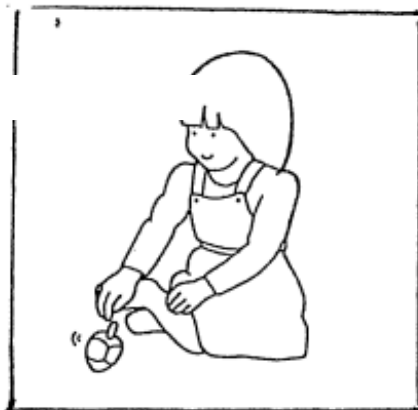
Sample:



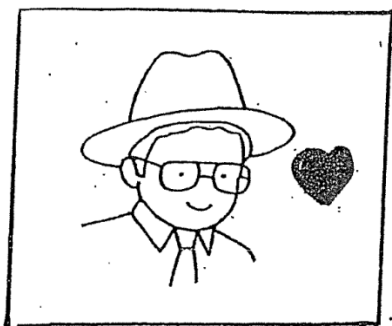
1.



2.



3.



4.



5.



6.



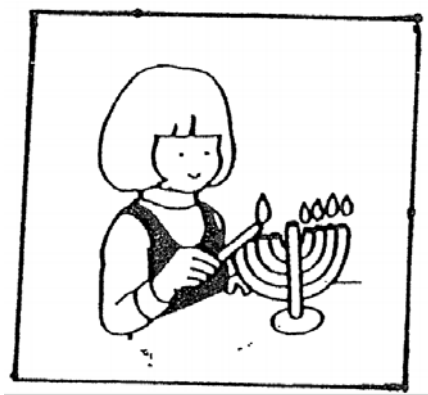
7.



8.



9.



10.





**Answer Sheet for Vocabulary Test- Expressive Language-****Module III** \_\_\_\_\_**Module IV** \_\_\_\_\_

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

6) \_\_\_\_\_

7) \_\_\_\_\_

8) \_\_\_\_\_

9) \_\_\_\_\_

10) \_\_\_\_\_

## Vocabulary Test- Module IV- Receptive Language

Directions: Explain to student that you will be saying a word in Hebrew that they have recently learned. Remind students that it is OK to say 'I don't remember'. Begin with an easy sample word. Ask each word and wait for student response. For verbs, student must give proper gender as well (i.e., יושב is sit for a boy). Sample: ילד (boy)

Student ID \_\_\_\_\_

- |     |                        |                              |       |
|-----|------------------------|------------------------------|-------|
| 1.  | בונה (boh-neh)         | [to] build (boy)             | _____ |
| 2.  | זורקת (zoh-rek-et)     | [to] throw (girl)            | _____ |
| 3.  | עינים (ay-na-yim)      | eyes                         | _____ |
| 4.  | אף (ah-f)              | nose                         | _____ |
| 5.  | מגפיים (ma-guh-fa-yim) | boots                        | _____ |
| 6.  | לובשת (loh-ve-shet)    | [to] wear/get dressed (girl) | _____ |
| 7.  | שלג (sheleg)           | snow                         | _____ |
| 8.  | כדור (kah-door)        | [a] ball                     | _____ |
| 9.  | גוף (goof)             | body                         | _____ |
| 10. | ראש (roh-sh)           | head                         | _____ |

## Vocabulary Test- Module IV- Expressive Language

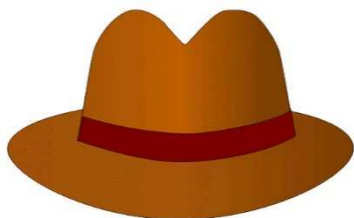
Directions: Explain to student that you will be showing them a picture that corresponds to a word they have recently learned. Remind students that it is OK to say 'I don't remember'. Begin with an easy sample picture. Show each picture and wait for student response. For verbs, student must give proper gender as well (i.e., יושב is sit for a boy).

Student ID \_\_\_\_\_

Sample:



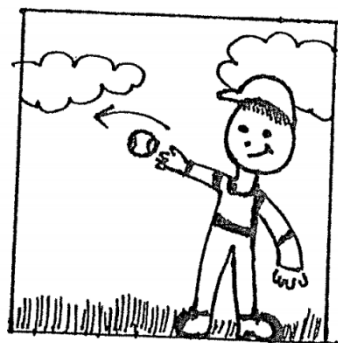
1.



2.



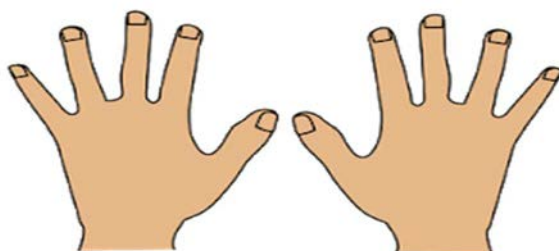
3.



4.



5.



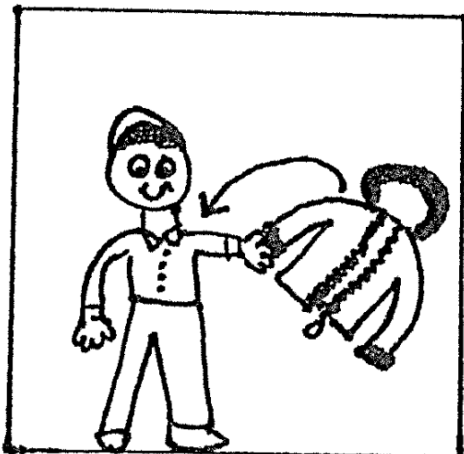
6.



7.



8.



9.



10.



### **Training Protocol for Vocabulary Test**

1. Explain the purpose of the vocabulary test
2. Show the vocabulary test and read through instructions
3. Explain protocol for receptive language task:
  - a. Say the word in Hebrew and ask student to say the translation in English
4. Explain protocol for expressive language task:
  - a. Show student a picture and ask them to tell you the word that matches the picture in Hebrew
5. Give research assistants a few minutes to look over the vocabulary test and ask questions
6. Pair up research assistants so they can role play administering the vocabulary test.
7. Review and answer any remaining questions.

## Appendix B

### Copy of Student Self-Report with Instructions; Training Protocol

Instructions:

- Introduce yourself to student. Say: **“Good Morning. My name is \_\_\_\_\_. I am going to ask you a few questions about learning Hebrew language. Is that OK? When we talk about Hebrew language together today, we are talking about learning new Hebrew words and how to recognize and remember what they mean. We are not talking about being able to read Hebrew words”. There are no right or wrong answers. Just say what you believe to be true for you. I’m going to be writing down what you say so I don’t forget what you said. OK?”**
  - Explain the process and do a practice example.
    - Say: **“A lot of kids feel very differently about learning Hebrew language. I want to find out how *you* feel about it. I am going to say something about Hebrew language and then ask you a question. Let’s try an example. Some kids really like sprinkles on their ice-cream. Some kids don’t like sprinkles on their ice-cream. Which is more like you?”**
      - Wait for student response, and restate their statement: **“So, you like sprinkles on your ice-cream.”** Probe further with: **“Is that really true for you, or sort of true?”** (Point to two thumbs when you say really true or one thumb when you say sort of true). OR say: **“So, you don’t like sprinkles on your ice-cream.”** Probe further with: **“Is that really true for you, or sort of true?”** (Point to two thumbs when you say really true or one thumb when you say sort of true). Say: **“Do you see me pointing to the one thumb? That is another way to show that you like it a little. When I point to the two thumbs, it means that you like it a lot. Do you understand the difference between one thumb and two? One means a little and two means A LOT. Can you tell me what one thumb means? What two thumbs mean?”** If student is not able to express the difference clearly, restate the above.
        - After receiving each answer, prompt the student for more information. Follow the script for each prompt.
        - Say: **“Do you understand what we are going to do? Do you have any questions? Let’s begin.”**
  - Administer each of the ten questions and log responses on scoring sheet.

## Questions:

1. Some kids try hard to follow directions right away when they are learning Hebrew language. Other kids aren't listening to the directions, and then don't know what to do.
  - a. Which is more like you? (If student does not understand, cue with: Are you more like the kid who follows the directions all the time, or only some of the time?)
  - b. Restate student's response. (ex- so, you follow directions right away.)
  - c. Is that really true for you, or sort of true? (*Behavioral: active involvement*)
  
2. Some kids are really interested in learning Hebrew language. Some kids find learning Hebrew language boring.
  - a. Which is more like you?
  - b. Restate student's response.
  - c. Is that really true for you, or sort of true? (*emotional/affective: interest*)
  
3. Some kids don't like singing songs in Hebrew. Other kids really like to sing the songs.
  - a. Which is more like you?
  - b. Restate student's response.
  - c. Is that really true for you, or sort of true? (*Cognitive: perseverance, & the use of metacognitive & self-regulated strategies*)
  
4. Some kids like Hebrew language time and wish they could learn more. Other kids are don't like Hebrew language time, and are glad when it is over.
  - a. Which is more like you?
  - b. Restate student's response.
  - c. Is that really true for you, or sort of true? (*Cognitive- going beyond the task*)
  
5. Some kids think learning Hebrew language is no fun at all. Other kids think learning Hebrew language is lots of fun.
  - a. Which is more like you?
  - b. Restate student's response.
  - c. Is that really true for you, or sort of true? (*entertaining*)
  
6. Some kids think that learning Hebrew language is important to them. Other kids think that it's not really important.
  - a. Which is more like you?
  - b. Restate student's response.
  - c. Is that really true for you, or sort of true? (*Relevant to student's life and interests*)

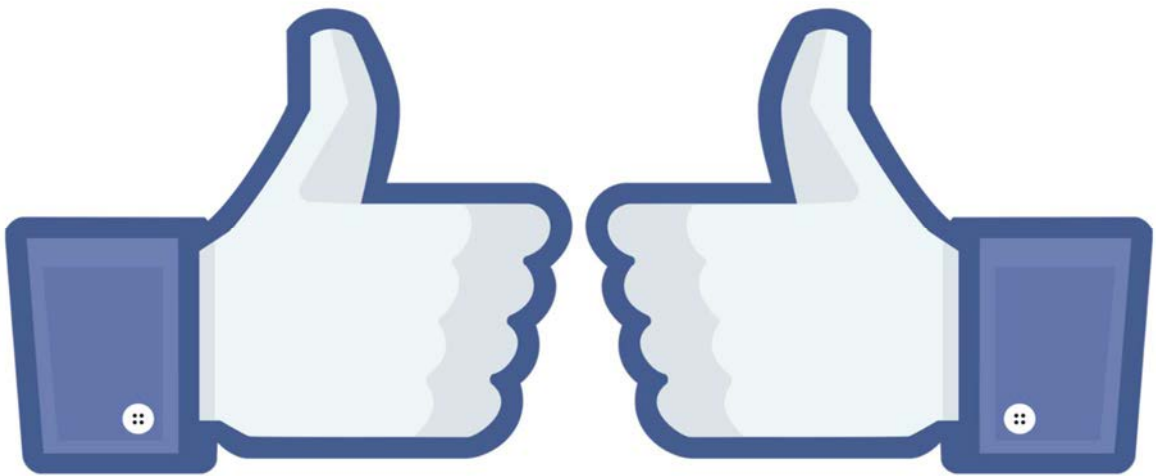


7. Some kids do good listening with ‘quiet hands and quiet mouth’ when they learn Hebrew language. Other kids don’t really listen to what the teacher is saying.
- Which is more like you?
  - Restate student’s response.
  - Is that really true for you, or sort of true? (*Behavioral: active involvement; intellectually stimulating*)
8. Some kids look around the room or think of other things when they learn Hebrew language. Other kids get so interested in Hebrew, that they don’t even realize other things going on in the room.
- Which is more like you?
  - Restate student’s response.
  - Is that really true for you, or sort of true? (*emotional/affective: interest*)
9. When some kids make mistakes in Hebrew language, they try to figure out what they did wrong. Other kids when they make mistakes don’t try to figure it out.
- Which is more like you?
  - Restate student’s response.
  - Is that really true for you, or sort of true? (*Cognitive-use of metacognitive strategies*)
10. Some kids don’t look at the teacher when she’s talking, and what she’s pointing at. Other kids always look at the teacher and what she’s pointing at.
- Which is more like you?
  - Restate student’s response.
  - Is that really true for you, or sort of true?

**Sort of**



**Really**



### **Training Protocol for Student Self-Report**

1. Say: **Before we begin, if there's something you don't understand, please stop me.**

2. Explain the purpose of the Student Self-Report:

Say: **"The purpose of the self-report is to determine how students feel about their engagement when learning Hebrew language."**

3. Show the self-report and read through instructions and self-report

Say: **"The self-report is structured to be accessible to a young child, so it may look a bit different than other self-reports. Additionally, since these subjects do not yet have the skill set to read the surveys independently, we will be reading the questions and answers to them. Also, some students need a visual; if needed, do one thumb up for 'sort of' and two thumbs up for 'really'. Students can point to the one that represents how they feel. It is important to read the instructions to students before beginning and doing the practice example. Read instructions and self-report out loud.**

4. Give research assistants a few minutes to look over the self-report and ask questions

5. Pair up research assistants so they can role play administering the self-report.

Review and answer any remaining questions.

## Appendix C

### Copy of Student Behavioral Observation with Instructions; Training Protocol

#### Student On-Task/Off-Task Observation

##### Instructions:

- You will be conducting several sessions of observations- some will be pre-intervention, and some will be during the intervention, on two classes.
- During the pre-intervention observation, students will be at their desks, with the teacher conducting a frontal lesson. During the intervention, students will be moving around the room. During both observations in each class, observers should be as unobtrusive as possible and refrain from interacting with the students.
- Observations are conducted in five-minute interval sweeps. You will spend approximately one minute per student. You will be assigned between 6 and 8 students before observations begin. All students will have a sticker on them, indicating their number, so observers can identify their sample subjects.
- Record observations for each student in the box with their code. If they are engaging in the observed behavior, place a check next to that item. If they are not engaging in the observed behavior, do nothing.
- Observations will be done over the course of several days- 20 students from the morning and 20 from the afternoon class will be observed on each day.

##### Guidelines:

Each part of the key on the observation sheet corresponds to specific behaviors you will be looking for during the observation. The chart below will help clarify what behaviors correspond to each item being observed.

|   | Pre-Intervention   | During Intervention   |
|---|--|---|
| F = Focused on Task                             | Looking at the teacher when appropriate.<br>Listening to and following directions.<br>Doing the activity that student is directed to do.   | Utilizing Hebrew vocabulary as part of activity.<br>Staying with activity until it is complete.<br>Engaging with peers and activity.  |
| A = Actively Participating in the Learning Task | Interacting with teacher when asked to do so.<br>Participates in group responses/activities.<br>Engaging with the material being taught.   | Absorbed in activity to the point of ignoring distractors.<br>Taking turns and participating with peers.<br>Seems to lose track of time while engaged in the activity.  |
| I = Interacts with peers- on task               | Responding to prompt initiated by peer.<br>Working collaboratively with peers as instructed by teacher.<br>Joining with peers in choral group responses.   | Socializing appropriately with peers during activity.<br>Talking to peers and engaging them using Hebrew vocabulary.<br>Seeking out peers to play with.   |
| P = Pleasure/ Enjoyment in Task                 | Look for facial and body cues such as smiling or laughing.<br>Excitedness or animation.<br>Eagerness to participate or have a turn.  | Look for facial and body cues such as smiling or laughing.<br>Excitedness or animation.<br>Eagerness to participate or have a turn.   |
| OT = Off Task                                   | Looking around room instead of at teacher or visual aid.<br>Talking to peers- NOT task related.<br>Disengaged- Fidgeting in seat or playing with items in desk or on person.<br>Not joining in group responses or participating individually.<br>Calling out and other disruptive behaviors. | Engaging in activities other than the ones provided by the teacher.<br>Talking to peers- NOT task related.<br>Disengaged- not engaging in the appropriate activity.<br>Not joining the group- Wandering around room or refusing to choose an activity.<br>Disruptive behaviors such as bothering other students, or acting silly. |





### **Training Protocol for Student On-Off Task Observation**

1. Explain the purpose of the Student Observation:

By conducting this observation, we are seeking to ascertain information on each student's level of engagement in the current learning task.

2. Show the Student Observation and read through instructions, guidelines, and Observation.

3. Give raters a few minutes to look over the information and ask questions

4. Practice doing five-minute sweeps. Raters will watch a video of students in a classroom from YouTube and use a stopwatch until they are comfortable with the observation tool. Practice will be conducted with two different types of videos- students simulating the pre-intervention classroom, and students simulating the intervention in process.

Links for pre-intervention

<https://www.youtube.com/watch?v=F4QMa9-le5Q>

<https://www.youtube.com/watch?v=QZNDpURbzqI>

<https://www.youtube.com/watch?v=lja3tQmEUrM>

Links for intervention observation-

<https://www.youtube.com/watch?v=fdZJiWnxhg0>

<https://www.youtube.com/watch?v=ZtJ7my7RCnk>

<https://www.youtube.com/watch?v=d8E3kSZp7P4>

<https://www.youtube.com/watch?v=te5n6kiXhjI>



<https://www.youtube.com/watch?v=QqL8OUIAfHE>

<https://www.youtube.com/watch?v=U0TtxWJwmOo>

5. Explain how students will be identifiable to research assistants through the use of a subject number with corresponding student picture.
6. Review and answer any remaining questions.

## Appendix D

### Games Used in Intervention

#### **Fishing Game**

Object of Game: Collect the most fish to win the game.

Number of Players: 4

Instructions: Players determine who goes first, second etc. and place all fish picture side down on the floor in the middle of the players. First player uses magnetic fishing rod to pick up a fish. Player has to say the verb or noun in the picture in Hebrew. If it's a verb, player must use correct grammar (masculine/feminine). If the player is correct, the player keeps the fish; if the player is incorrect, the fish goes back into the middle and the next player takes a turn. Play continues until all the fish are gone. The winner is the player with the most fish.



### Memory Matching Game

Object of Game: Collect the most matching sets of snowflake cards

Number of Players: Between two and four players.

Instructions: Place all cards picture down on the playing area. Students take turns turning over two cards at a time, and naming the picture on each card. If the cards are identical and the player can name the pictures on the card, they keep the set and the next player goes. If they do not correctly name the picture, the cards are turned back over and play resumes with the next player. Game ends when all cards have been matched.



## Tic Tac Toe Game

Object of Game: Be the first player to cover a row of three boxes, either across, down, or diagonally to win the game.

Number of Players: Two players.

Instructions: The yellow board is placed between the players and the deck of cards with pictures are placed face down on the side. First player picks a card from the deck and says what the picture (verb/noun) is in Hebrew. If the word is said correctly using appropriate grammar (masculine/feminine) the player puts a piece on the board. If the player does not say the word correctly, the card is placed on the bottom of the pile and play continues with the next player. Play continues until a player has filled up a row of three boxes.



## Writing Game

Object of Game: Have fun walking around the room, finding words that are connected to the lesson and write them on the paper attached to the clipboard.

Number of Players: Up to three players.

Instructions: Student chooses a clip board and walks around the room, writing down words that have to do with the unit. Students can choose to write a single word, a full sentence, and then illustrate it. When a page is done, the student reads the words to a teacher. Student can keep the papers they created in their homework folder. Students can write as

much or as little as they choose. This activity can be played independently or with a peer.



### **Verb Game**

Object of Game: Be the player to collect the most chips to win.

Number of Players: Up to three players.

Instructions: Student decide who goes first, second, etc. Playing chips are places in the middle between the players. First player spins the spinner. If student is able to accurately identify the verb using correct gender (masculine/feminine), they may put a chip on their basket. If student does not correctly identify the verb, their turn is over and the next player goes. When all the chips are used up, the player with the most chips, wins.



## Dress Up Dolls

Object: Be the first to dress up your doll with winter gear.

Number of Players: Two players.

Instructions: Student spins the spinner to land on a word. If the student can read the word and knows its meaning, the student can dress up their doll with that item of clothing. The next student takes their turn. If the student lands on a word and their doll already has that item of clothing, the student's turn ends and play moves on to the next student. The winner is the first to dress up their doll with all the winter gear.



## Build a Sentence Game

Object: Be the first to

Number of Players: Up to four players.

Instructions: Cards are sorted into one of three piles- hat, mitten, boot and places picture/word down in between piles. First student picks one card from each pile and turns over the cards. Student then attempts to make a sentence with the three words. If the words match grammatically and by gender, student may keep the cards after saying the sentence out loud. If the student does not know one of the words in the sentence, student puts the cards on

the bottom of the piles and play moves to the next student. If the words do not match grammatically or by gender (for example: the uncle/is wearing- feminine/a sweater), the student can pick one card from any of the three piles to try to make the sentence work. They can either change the person, the verb or gender of the verb, or the object. Winner is the student with the most complete sentences.



### Board Game

Object: Be the first player to get their piece to the end of the board.

Number of Players: Up to four players.

Instructions: Cards are placed with number side up in a pile next to the board. Players take turns picking a card, and saying the word on the other side of the card. If they say the word accurately, they can move the corresponding number of spaces on the board that is listed on the front of the card. If a student says the word incorrectly, the card is placed on the bottom of the pile and play moves to the next student. Winner is the student who reaches the finish line first.



## Appendix E

### Informal Interview Questions

Student ID: \_\_\_\_\_

1. Is learning Hebrew language interesting or boring? Why?
2. Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?
3. Is there anything about learning Hebrew language that you don't like? Why?
4. What makes learning Hebrew language fun/not fun? Why?
5. What would make learning Hebrew language more fun?
6. Did you like playing Hebrew language games? Why?
7. How was that different than the way you usually learn language?
8. Did you enjoy learning Hebrew language more when using games? Why/why not?
9. Did you feel that you knew the words better when you played games or when you learned without playing games? Why?



## Appendix F

### Transcribed Informal Interview- Student Responses

Student ID: 1

I: Is learning Hebrew language interesting or boring? Why?

S: *It's interesting because you learn.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: [shakes head yes]

S: [shrugs head to imply I don't know]

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Yes.*

I: Tell me. Can you tell me what you don't like? You don't know why you don't like learning Hebrew language?

S: [shakes head yes]

I: What makes learning Hebrew language fun/not fun? Why?

S: *Reading.*

I: Why is it fun?

S: *Because you learn.*

I: What would make learning Hebrew language more fun?

S: *To learn better in Hebrew.*

I: Can you explain?

S: [shakes head no]

I: Did you like playing Hebrew language games? Why?

S: [shakes head yes]

I: Why?

S: *'Cuz then you learn Hebrew better.*

I: How was that different than the way you usually learn language?

S: *You see the words.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [shakes head yes]

I: Why?

S: *Because they are fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *With learning games.*

I: Why?

S: *I don't know.*

Student ID: 2

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting.*

I: Why?

S: *Because Hebrew is the first one.*

I: Go ahead.

S: *It's the first one of the Torah.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yeah. Because it's fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun.*

I: Why?

S: *Hebrew is fun because there's a lot of things to play with and learn and we learn script.*

I: Is there anything not fun?

S: [shakes head no]

I: What would make learning Hebrew language more fun?

S: *Hebrew language is more fun because there is a lot of toys to play with.*

I: Did you like playing Hebrew language games? Why?

S: *Hmmm. Yeah.*

I: Why?

S: *Because it's so much fun to play with it.*

I: How was that different than the way you usually learn language?

S: *I don't know.*

I: How is it different than when you used the games?

S: *Sometimes we played games and have fun.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yeah. Because it's so much fun to play a game.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *With learning games.*

I: Why?

S: *If you don't know the games maybe you could ask Morah if you don't know it.*

I: And that helps you know the words better?

S: [shakes head yes]

Student ID: 3

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting because you get to learn and do stuff and it is fun.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because you could sing stuff in your [siddur] play and it's fun and everyone watches you.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun- Because you get to learn new words.*

I: What would make learning Hebrew language more fun?

S: *Learning even more words.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because it is fun.*

I: How was that different than the way you usually learn language?

S: *Sound out words like by Kriyah because you're not really reading and sounding out letters, you just know the words already, Morah already told it to us.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because you get to play games and speak Hebrew.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games?

S: *Without games, because most of the game is playing.*

Student ID: 4

I: Is learning Hebrew language interesting or boring? Why?

S: *Fun.*

I: Why?

S: *Because it's fun learning and if you want to go to Israel you have to learn Hebrew.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: [shakes head yes].

I: Why?

S: *'Cuz it's fun singing Hebrew songs. Sometimes we all love hearing Hebrew songs like in Israel we sing Hebrew songs.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *That you get to learn Hebrew a lot and some kids say it's fun.*

I: And not fun?

S: *Nothing.*

I: What would make learning Hebrew language more fun?

S: *Uhhm. Learning a lot of them.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, because they're fun and they're very fun; because you get to play with dolls and you get to speak Hebrew. No English.*

I: How was that different than the way you usually learn language?

S: *Uhhm. 'Cuz Hebrew is backwards than English.*

I: Repeated question.

S: *'Cuz she says the words in English but we say it in Hebrew [when we play].*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yeah.*

I: Why?

S: *'Cuz it's very fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without games.*

I: Why?

S: *'Cuz I wanted everyone to get a turn.*

I: How did that make it so you know the words better? Did you mean that you were so busy playing the game that you didn't concentrate on the words?

S: [shakes head yes]

Student ID: 5

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting.*

I: Ok. Why?

S: *Because if it's boring you won't learn anything and then you won't be smart when you grow up.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *כן* Yes

I: Why?

S: *Because then you know Hebrew better.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Learning so much.*

I: And not fun?

S: *Doing nothing.*

I: Why?

S: *Because then you get bored.*

I: What would make learning Hebrew language more fun?

S: *That means we get to learn more and that's fun because we want to learn so much.*

I: Did you like playing Hebrew language games? Why?

S: *Yes.*

I: Why?

S: *Because they're fun.*

I: How was that different than the way you usually learn language?

S: *In print.* [pointed to the sample game on the table].

I: Do you mean these games were in print?

S: *Yes.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes.*

I: Why?

S: *'Cuz it's more fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Was better with learning games.*

I: Why?

S: *Because sometimes you know the words.*

I: When you are playing the games or not playing the games?

S: *Both.*

Student ID: 6

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting.*

I: Why?

S: *Because if I don't know some words, I'll get to learn the words.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: [shakes head yes]

S: *Because I learn more words in Hebrew.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Not so much.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *When we sing songs in Hebrew, a little bit in Hebrew.*

I: Why?

S: *'Cuz sometimes they're fun to sing.*

I: What would make learning Hebrew language more fun?

S: *By having more fun.*

I: Ok. How could you make it fun?

S: *Like play with Hebrew things?*

I: Any ideas of what to play with?

S: *Like dolls.*

I: Did you like playing Hebrew language games? Why?

S: *Yes. They're fun to play with.*

I: How was that different than the way you usually learn language?

S: *I don't know. When Morah teaches, she doesn't usually use games to teach Hebrew.*

I: So how was that different from when we played games?

S: *By like, playing different ways.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *A little bit.*

I: Why?

S: *'Cuz sometimes I'm not in the mood of playing.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without playing games.*

I: Why?

S: *Because Morah teaches. She does it more. She like writes it on the board and like explains what she is doing.*

Student ID: 7

I: Is learning Hebrew language interesting or boring? Why?

S: *I don't know. It's interesting and boring.*

I: Why?

S: *I don't know.*

I: How could it be both?

S: *Because one time, I don't really remember.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Morah says 'Mah Hamilah' and I say the correct word.*

I: Why do you like it?

S: *Because we get to scream.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *I don't like to do P'alim [Hebrew verbs].*

I: Why?

S: *Because I don't really like cutting and gluing.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun?*

I: Why?

S: *When we read stories about in Hebrew and we play games in Hebrew that is fun and we talk in Hebrew.*

I: And not fun?

S: *That uhm we don't speak Hebrew and we don't lay Hebrew games and read Hebrew stories.*

I: What would make learning Hebrew language more fun?

S: *I don't know.*

I: Did you like playing Hebrew language games? Why?

S: *Yes.*

I: Why?

S: *Because games are fun.*

I: How was that different than the way you usually learn language?

S: *It teaches us more Hebrew sometimes.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes!*

I: Why?

S: *Cuz! We get to like spin the thing and then we land on the word and we get to learn the game.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Both of them.*

I: Why?

S: *Because Hebrew is so easy to learn.*

I: Is that because you speak Hebrew?

S: *Yes [smiled]*

Student ID: 8

I: Is learning Hebrew language interesting or boring? Why?

S: *Boring. I don't know.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *[shakes head no] She does it all over again.*

I: So, you do the same things a lot of times?

S: *[shakes head yes]*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Writing. I don't know.*

I: Why?

I: Why is it fun?

S: *Playing games.*

I: Why is it not fun?

S: *I don't know.*

I: What would make learning Hebrew language more fun?

S: *I don't know.*

I: Did you like playing Hebrew language games? Why?

S: *[shakes head yes] I don't know.*

I: How was that different than the way you usually learn language?

S: *I don't know.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes. It's fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games?

S: *Without playing games. I don't really know.*

Student ID: 9

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because I really find new things and I love Hebrew language.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Uh-huh. Because they're fun and I love Hebrew language*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Uhm, no.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun- I think because they're like new things because I don't know a lot of Hebrew.*

I: What is not fun?

S: *Uhm I don't know. I like Hebrew language.*

I: What would make learning Hebrew language more fun?

S: *Uhm, it makes it more fun because uhm, like because really, I don't know a lot.*

I: Did you like playing Hebrew language games? Why?

S: *Hm-hm. Because they're fun and I love Hebrew.*

I: How was that different than the way you usually learn language?

S: *Because these games are like Hebrew and the spinner is Hebrew. My games at home are like English. Because playing games are when you play games with them and learning is when you sit and learn.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Uh huh. Because they are fun. Hebrew language is fun to me.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games?

S: *When I learned them without playing games because games are like we don't learn about games that's why.*

I: Why?

S: *We play games we don't learn about them.*

Student ID: 10

I: Is learning Hebrew language interesting or boring? Why?

S: *It's interesting unless I know the word. It's not that interesting if I don't know the word because then I learn something new.*

I: Why or why not?

S: *But by the hatzagas Hasiddur [siddur play] songs I loved. If you do the same thing too much, like eating the same food too much, you don't want to eat it anymore. You get sick of it.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *I don't think so.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Let me think about that one. It is fun when you learn new things and I learn what they mean and if I don't know one word, I figure it out and it is exciting.*

I: What would make learning Hebrew language more fun?

S: *I don't think I know the answer well. It's funner if it's like I forgot what I was gonna say.*

I: Did you like playing Hebrew language games? Why?

S: *Yes. They're really fun.*

I: How was that different than the way you usually learn language?

S: *It's different because it's a little strange doing things I'm not used to. Remember the board game with the words? I kept forgetting all the rules. I also like doing new things because I find new ways to use the game.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *[shakes head yes] Because when I use a game it's not like sitting around and having to do nothing. Sitting around and having to do nothing is boring... you sit still all day.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games?

S: *Well, when I played games, I feel like I'm having more fun. When I'm at a desk I feel like I'm learning it more because I'm not distracted and having fun.*

Student ID: 11

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting. Because you can learn....*

I: What?

S: *Uhm, learn things that you don't know.*

I: Do you like singing songs in Hebrew, like the song *מה המילה?* Why or why not?

S: *[shakes head yes] Because you learn like uhm, Omeid like you can learn Shosah [Hebrew verbs: Omeid- stand - masculine; shosah- drink- feminine]*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *I don't like learning questions. Uhm, I don't like listening.*



I: What makes learning Hebrew language fun/not fun? Why?

I: What makes it fun?

S: *Playing games because you get to play games that are fun.*

I: What makes it not fun?

S: *Because it is hard.*

I: What would make learning Hebrew language more fun?

S: *We did something like yachid [singular masculine] and rabim [plural masculine] and we had to do like the [Hebrew letter] yud, the [Hebrew letter] ches has to be like those dots. And we.... The [Hebrew letter] daled had to be like an "E" and then a [Hebrew letter] yud and then a [Hebrew letter] mem sofis*

I: Why does that make it more fun?

S: *Because I got it right.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, because you learn how to do Hebrew games.*

I: How was that different than the way you usually learn language?

S: *Something we get to do in English.*

I: When?

S: *Like today.*

I: When you are doing Hebrew games it's just Hebrew?

S: *[shakes head yes]*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Because when you [learn] English words are different like phone; that's why I like doing Hebrew games better.*

I: Can you explain?

S: *English words are different; Hebrew has to be like the right letters.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games?

S: *Better. Like me-eel [a coat] so, better when playing games. Because you need to wear [listed Hebrew words you wear] because Morah teaches you what is Hebrew.*

Student ID: 12

I: Is learning Hebrew language interesting or boring? Why?

S: *Boring.*

I: Why?

S: *I don't know.*

I: If you feel it's not interesting, there has to be a reason. Why is it boring?

S: *I don't know.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *[shakes head yes] Because I like learning songs in Hebrew.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Yeah. Reading.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *[shrugs shoulders] I don't know.*

I: Is there anything that makes learning Hebrew language fun?

S: *I don't know.*

I: What about not fun?

S: *I don't know.*

I: What would make learning Hebrew language more fun?

S: *If I listen to a teacher [it would be more fun].*

I: Why?

S: *Can't explain it.*

I: Did you like playing Hebrew language games? Why?

S: [shakes head yes] *Because they're fun.*

I: How was that different than the way you usually learn language?

S: *I don't get it. I don't know.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [shakes head yes]. *Because my teacher tells me what to do [when I'm learning]. My teacher could help me if I don't know what a word is.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *When I played games.*

I: Why?

S: *Because I like it.*

Student ID: 13

I: Is learning Hebrew language interesting or boring? Why?

S: *Boring, I don't know.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: [shakes head yes] *It's fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Not really.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Not so fun. I don't know.*

I: What would make learning Hebrew language more fun?

S: *If we get to color a lot.*

I: Did you like playing Hebrew language games? Why?

S: [shakes head yes] *Because we have free time.*

I: Tell me more.

S: *We get to be in a group with our friends and play together.*

I: How was that different than the way you usually learn language?

S: *Morah is not telling you what to do.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [shakes head yes] *Because you don't have to say the word, you're just spinning it.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without the games, because she is telling you how to sound it out and stuff.*

Student ID: 14

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because I don't know.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because I like to remember the words.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun, because mommy taught me Hebrew is fun and whenever I speak in English, she tells me she can't understand me so I am saying you do understand me because you want me to talk Hebrew.*

I: What would make learning Hebrew language more fun?

S: *I don't know.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because I like playing games.*

I: How was that different than the way you usually learn language?

S: *Sometimes I play games in English and sometimes in Hebrew.*

*I don't know.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because if we don't know the words then you need to choose a different game and try again.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without playing games, because when I was little, I heard my mother and father talking in Hebrew and they didn't understand each other so they said it in English and then baby language.*

Student ID: 15

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because it is fun.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *No, it's not fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *When I learn it makes it fun because I like it.*

I: What would make learning Hebrew language more fun?

S: *Learning more.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because everyone was playing as a group.*

I: How was that different than the way you usually learn language?

S: *I don't know, usually by listening.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because it was very very fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Playing the games, because I liked it a lot.*

Student ID: 16

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because I don't know.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because I like to [sing].*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

I: Fun?

S: *Because I like it.*

I: What would make learning Hebrew language more fun?

S: *I don't know.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because it is fun.*

I: How was that different than the way you usually learn language?

S: *I don't know.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because I don't know.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without playing games, because I don't know.*

Student ID: 17

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because I learned a new language.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because I like singing.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Learning a new language is fun.*

I: What would make learning Hebrew language more fun?

S: *No.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because they are fun.*

I: How was that different than the way you usually learn language?

S: *Because Hebrew language is interesting.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because it's really fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *When I played games because I don't know.*

Student ID: 18

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because I can learn new things.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *No, because it is annoying.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Reading, because it is hard.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun, because we get to play games.*

I: What would make learning Hebrew language more fun?

S: *What we have in the classroom right now; we get to color.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because they are fun.*

I: How was that different than the way you usually learn language?

S: *Usually read or write. {confused}*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, they were helping me learn.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Learned without playing games, because I like when I learn without games.*

Student ID: 19

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, you won't know it and it will be interesting.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Kind of. Because I never think Hebrew but I never sing Hebrew. When you learn Hebrew, I'll sing in Hebrew; also, it's interesting.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Because it's like a different language that you don't know and it's fun.*

I: What makes is not fun?

S: *Nothing.*

I: What would make learning Hebrew language more fun?

S: *I don't know.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, because it is games and I like playing games.*

I: How was that different than the way you usually learn language?

S: *Because it's games. That's how it's different. Usually, my teacher just says Hebrew and she teaches us and that is just games.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yeah, because that was a lot of fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without playing games, because with Hebrew games you say words that you learned; it only has pictures of what you learned, but when you learn, it's something you didn't learn about.*

Student ID: 20

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, you get to learn new things.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, they're fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *I don't know.*

I: What makes it not fun?

S: *I don't know.*

I: What would make learning Hebrew language more fun?

S: *A birthday party.*

I: How?

S: *I don't know.*

I: Did you like playing Hebrew language games? Why?

S: *Yes. They're fun.*

I: How was that different than the way you usually learn language?

S: *I don't know.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *No. Because I like learning actual Hebrew.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *When you weren't playing games.*

Student ID: 21

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because you could learn a lot and it's fun.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yeah, so I could write it. After we do that, we write a sentence in our notebook about it.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Learning and reading.*

I: What makes it not fun?

S: *No parts are not fun.*

I: What would make learning Hebrew language more fun?

S: *Learning how to write in script Hebrew words? Writing them in a notebook.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because it is in Hebrew.*

I: Why?

S: *It's fun and it's more learning and keeping up.*

I: How was that different than the way you usually learn language?

S: *There were pictures and that's it.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, [it] shows us how to learn.*

I: So, did you enjoy it more when you used games?

S: *Both.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *When Morah teaches us [without games] because if it's with games and we didn't learn it yet I wouldn't know it.*

Student ID: 22

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because it's interesting stuff.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because it sounds good.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Because you get to learn.*

I: What makes it not fun?

S: *[shook head no]*

I: What would make learning Hebrew language more fun?

S: *Playing games.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because sometimes I win.*

I: How was that different than way you usually learn language?

S: *Because they're different words.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *More the way Morah usually does. It's more fun to learn.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without games. The other way she used more words.*

Student ID: 23

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because we learn interesting stuff.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Not really because I don't know the songs so much.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Yes, Notein [give- masculine], Kovah [hat], Yalkut [backpack] and that's it.*

I: Why do you like those words? *Because I just like that I don't know.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Writing, because I like writing.*

I: Not fun?

S: *No.*

I: What would make learning Hebrew language more fun?

S: *Writing.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because they are fun.*

I: How was that different than the way you usually learn language?

S: *I don't know.*

I: Rephrased question.

S: *Because there's uhm words on the board.*

I: Prompted:

S: [student clarified that there were words] *on the games.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because playing games is fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Better when I played the games because I could read the words and usually I can't.*

Student ID 24

I: Is learning Hebrew language interesting or boring? Why?

S: *Boring, 'cuz it's like you don't really like to get like play or like do whatever you want. You just have to listen and look at the moran.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yeah. Because it's like fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *I don't like uhm Pe'alim [Hebrew verbs] but like, I like others cuz like after you have to like glue all the stuff on your notebook, and it's annoying cuz your hands get sticky. And, you have to guess what Pe'alim you are learning that day. She shows us a hint and it's very hard, like Ho'lech [to go- masculine] she starts walking.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Mrs. H. does funny things in middle of when she's doing all the like teaching. I like the games in Hebrew class.*

I: What makes it not fun?

S: *You have to like sit and do this and do that and read this Hebrew and that.*

I: What would make learning Hebrew language more fun?

S: *Like eating ice-cream while we're learning.*



I: For real?

S: [Eye roll] *Playing with toys to learn. Like in English. Take toys one on one. Take or pretend like a cube thingy and add another cube. That would be fun.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, 'cuz I like playing games.*

I: How was that different than the way you usually learn language?

S: *It's like a game but like in Hebrew language you have to say it not play it.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yeah. 'Cuz games are much more fun than just saying the words.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without playing games.*

I: Why?

S: *When you play a game you have to say it, you can't think for like 10 hours. When it's not playing a game, you could really think.*

Student ID: 25

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting. 'Cuz, you learn new things.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yeah. 'Cuz it's fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *No.*

I: What makes it not fun?

S: *No.*

I: What would make learning Hebrew language more fun?

S: *That you learn a lot.*

I: Did you like playing Hebrew language games? Why?

S: [Shakes head yes] *'Cuz it was fun.*

I: How was that different than the way you usually learn language?

S: *'Cuz it's more interesting.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [Shakes head yes] *'Cuz it was, 'cuz I like it.*

I: You like playing games?

S: [Shakes head yes].

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *With games, 'cuz I learned more.*

I: So, you know it better because you learned more?

S: [shakes head yes]

Student ID: 26

- I: Is learning Hebrew language interesting or boring? Why?  
 S: *Interesting, because you get to learn new stuff.*
- I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?  
 S: *I do.*
- I: Why?  
 S: *I don't remember.*
- I: Is there anything about learning Hebrew language that you don't like? Why?  
 S: *No.*
- I: What makes learning Hebrew language fun/not fun? Why?  
 S: *When you get to color.*
- I: Why? Because you like coloring?  
 S: *[shakes head yes].*
- I: What would make learning Hebrew language more fun?  
 S: *[no response]*
- I: Think about what you do and wish you could do.  
 S: *Color more.*
- I: Did you like playing Hebrew language games? Why?  
 S: *[shakes head yes] I like to be with my friends.*
- I: How was that different than the way you usually learn language?  
 S: *Then I am far from some of my friends.*
- I: Did you enjoy learning Hebrew language more when using games? Why/why not?  
 S: *Yeah. Because I could play games.*
- I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?  
 S: *When I learn the new words.*
- I: Without playing games?  
 S: *[shakes head yes] Because then I could learn more Hebrew words.*
- I: So, you feel like you learned more when you weren't using games?  
 S: *[shakes head yes]*

Student ID: 27

- I: Is learning Hebrew language interesting or boring? Why?  
 S: *Interesting, uhhh, cuz it helps us learn.*
- I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?  
 S: *Not really, because we say it sometimes and it gets boring.*
- I: Is there anything about learning Hebrew language that you don't like? Why?  
 S: *Pe'alim, because if you have to glue it and cut and you need to write sentences and you need to raise your hand for a long time.*
- I: Why?  
 S: *So, Morah can check it.*
- I: What makes learning Hebrew language fun/not fun? Why?  
 S: *Because you get to write a short mishpat [sentence].*
- I: What makes it not fun?  
 S: *Like when you have to read.*

I: What would make learning Hebrew language more fun?  
 S: *Uh. If we had something that's better.*  
 I: Like what?  
 S: *Like you say a mishpat [sentence] that would be interesting.*  
 I: Did you like playing Hebrew language games? Why?  
 S: *[shakes head yes] It's fun. It's really fun when we have to take a break and play.*  
 I: How was that different than the way you usually learn language?  
 S: *With the [white] board.*  
 I: Morah usually is at the board?  
 S: *[shakes head yes]*  
 I: And where is everyone else?  
 S: *On the kisay [chair].*  
 I: How is that different from when we were playing games?  
 S: *Because you could go to the carpet or another kisay [chair].*  
 I: So, you had choices?  
 S: *[shakes head yes]*  
 I: Did you enjoy learning Hebrew language more when using games? Why/why not?  
 S: *Yeah, cuz sometimes I like to sit down when it's Hebrew time.*  
 I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?  
 S: *Better when playing games.*  
 I: Why?  
 S: *Because I catch a little more.*  
 I: So, you remember it more if you play?  
 S: *[shakes head yes]*

Student ID: 28

I: Is learning Hebrew language interesting or boring? Why?  
 S: *Interesting, because it teaches you how to learn. If you wouldn't know then you wouldn't like anything about Hebrew; you wouldn't care about Hebrew.*  
 I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?  
 S: *No, because I don't know a lot of songs in Hebrew. I only know like one or two that's why I don't like singing songs.*  
 I: Is there anything about learning Hebrew language that you don't like? Why?  
 S: *Like? No.*  
 I: What makes learning Hebrew language fun/not fun? Why?  
 S: *It teaches you how to learn.*  
 I: Why is that fun?  
 S: *Because then if you don't listen to what Morah is saying and what if it's your turn to read and you didn't hear then she'll skip to a new person.*  
 I: Not fun?  
 S: *Nothing.*  
 I: What would make learning Hebrew language more fun?  
 S: *It's exciting like on the first day of school you don't know how to read anything and then you learn and it becomes fun.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, because it's very fun you gather together to play; if you play by yourself then it would not have been fun.*

I: How was that different than the way you usually learn language?

S: *From the games it says it on something else that's why it's the same but it's still talking in Hebrew language.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *I like games better because whenever you read and you don't pay attention and then she skips and it's not really fun, but in a game, you can say first me then you and you.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *When we played games, because whenever in the book it shows us in medium size, and games are different colors and in the book its only black.*

Student ID 29

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting.*

I: Why?

S: *Uhm. I don't know.*

I: Do you like singing songs in Hebrew, like the song מה המילה? Why or why not?

S: *Yeah. Cuz they're fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Singing and you get to learn a lot of Hebrew and you get to learn a different language.*

I: What makes it not fun?

S: *No.*

I: What would make learning Hebrew language more fun?

S: *Uhm, if you know all the Hebrew.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, cuz they're fun.*

I: How was that different than the way you usually learn language?

S: *Very.*

I: Why?

S: *Because when you play a game it's not like learning.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [shakes head yes] *It's fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Better with the games.*

I: Why?

S: *I don't know.*

I: Why do you think playing games helped you know the words better?

S: *It's fun to learn different words. What if a word is funny? It's fun.*

Student ID: 30

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, 'cuz you learn let's say you don't know a word, you learn what it is.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Kein [yes]. 'Cuz it's like fun to learn the words and you get to sing a song and I like singing songs.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *'Cuz you get to learn different things.*

I: What makes it not fun?

S: *No.*

I: What would make learning Hebrew language more fun?

S: *If there was more Hebrew to it.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, 'cuz first of all you get to learn all the words and it's fun to play all the games.*

I: How was that different than the way you usually learn language?

S: *'Cuz we learn Hebrew. First, we learn the word right, but we don't play the games.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yeah, 'cuz it helps me learn and it's funner that way.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *With playing games.*

I: Why?

S: *Because when you play the game you repeat it again and again and again.*

I: How did that help you know the words?

S: *Because when you repeat the words you know it better.*

Student ID: 31

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because it is good.*

I: What is good about it?

S: *To learn about it.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yeah, because they are fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *That you get to write.*

I: What is not fun?

S: *No.*

I: What would make learning Hebrew language more fun?

S: *To write.*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, because they're fun.*

I: How was that different than the way you usually learn language?

S: *You write the words.*

I: So, you write the words when Morah teaches you?

S: *[nodded head yes]*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because...*

I: Can you think of a reason?

S: *[shook head no]*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Better without playing games.*

I: Why?

S: *Because games are not that fun.*

Student ID: 32

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because you learn more words in Hebrew.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because they're like what's the word for the sentence.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No, I mean I don't like any, I like all. I like them a lot.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Learning more letters.*

I: What makes it not fun?

S: *When I don't learn more letters.*

I: What would make learning Hebrew language more fun?

S: *I'm thinking.*

I: We'll go back to that one at the end.

S: *Talking in Hebrew.*

I: Did you like playing Hebrew language games? Why?

S: *Mhm, because they are fun.*

I: How was that different than the way you usually learn language?

S: *You have to say the word, I mean the sentence.*

I: So, you mean when you are learning with Morah you don't have to say it?

S: *We just like sound it out and say a sentence.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because we learned Hebrew words.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Both.*

Student ID: 33

I: Is learning Hebrew language interesting or boring? Why?

S: *I don't like it because I have to take out everything but saying them is fine.*

- I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?  
 S: *Sometimes. I don't care but I don't like to do it but I do.*
- I: Is there anything about learning Hebrew language that you don't like? Why?  
 S: *Writing sentences.*
- I: Why?  
 S: *'Cuz you have to do Ani Mevarechet [I bless- feminine] blah blah blah.*
- I: Why is that bad or something you don't like?  
 S: *Because sometimes I get it wrong and it's hard to understand.*
- I: What makes learning Hebrew language fun/not fun? Why?  
 S: *Like using them to talk; the Hebrew words.*
- I: What makes it not fun?  
 S: *Like people are like what else are you talking about.*
- I: Do you mean they don't understand you and you have to tell them?  
 S: *[shakes head yes]*
- I: What would make learning Hebrew language more fun?  
 S: *I'm gonna take the words and make a game with it.*
- I: Did you like playing Hebrew language games? Why?  
 S: *[shakes head yes] Because you get to use fun spinners.*
- I: How was that different than the way you usually learn language?  
 S: *'Cuz you get to have fun and it's like fun to learn it.*
- I: Did you enjoy learning Hebrew language more when using games? Why/why not?  
 S: *Uh huh. 'Cuz it's more funner.*
- I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?  
 S: *Both. 'Cuz it's easy to remember.*

Student ID: 34

- I: Is learning Hebrew language interesting or boring? Why?  
 S: *Interesting. 'Cuz, you get to know more Hebrew that you never knew before.*
- I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?  
 S: *Yeah, 'cuz I want to learn more songs in Hebrew.*
- I: Is there anything about learning Hebrew language that you don't like? Why?  
 S: *A little bit. Things I already know I don't want to learn it again.*
- I: What makes learning Hebrew language fun/not fun? Why?  
 S: *Learning new words.*
- I: What makes it not fun?  
 S: *No.*
- I: What would make learning Hebrew language more fun?  
 S: *Learning more stuff.*
- I: Did you like playing Hebrew language games? Why?  
 S: *Kein [yes]. 'Cuz it's fun. If I'm upset or mad it calms me down.*
- I: How was that different than the way you usually learn language?  
 S: *We do different stuff.*
- I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *When I'm using games.*

I: Why?

S: *Because when we didn't learn those words, I didn't know what it was and I know it now.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Both. Because like I said, you get to know more words and on the other hand once you know more you know more.*

I: So how did the games help you learn words?

S: *We did different stuff in the games than learning.*

I: It helped you remember the words better?

S: *Yes.*

Student ID: 35

I: Is learning Hebrew language interesting or boring? Why?

S: *Boring, because we just sit and do nothing.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: [Nodded head yes] *Because it's fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: [shook head no]

I: What makes learning Hebrew language fun/not fun? Why?

S: *Because I like doing it.*

I: What makes it not fun?

S: *Sitting there doing nothing.*

I: What would make learning Hebrew language more fun?

S: *If we did something while we're sitting.*

I: Did you like playing Hebrew language games? Why?

S: [Nodded head yes] *Yeah, because it was fun.*

I: How was that different than the way you usually learn language?

S: *Because you play it and don't learn it.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [nodded head yes] *Yeah, because it's fun to play the games and not just sit there.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without playing games, because when you play it's just like a fun thing you do but when you learn it's like you're doing it without playing a game.*

Student ID: 36

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because you learn a lot.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Yes, because it's a fun song.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *Yes, Omedes [standing feminine] because it's really long.*



I: When you have to write it?

S: *Yeah.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Learning.*

I: What makes it not fun?

S: *You have to read because then your mouth gets really hurt.*

I: What would make learning Hebrew language more fun?

S: *Sitting.*

I: What do you usually do?

S: *Sit at a desk.*

I: Did you like playing Hebrew language games? Why?

S: *Yes, because I like all my friends.*

I: How was that different than the way you usually learn language?

S: *Good [games].*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because it was so much fun.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *I knew it when I did play games because then you can get really smart.*

I: What about playing games helps you get smart?

S: *You keep reading it and then you can get smart.*

Student ID: 37

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting.*

I: Why?

S: *Because it helps us read more.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *I like singing because it's fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

[shakes head no]

I: What makes learning Hebrew language fun/not fun? Why?

S: *Because it's Torah*

I: What makes it not fun?

S: *I don't know that one yet.*

I: What would make learning Hebrew language more fun?

S: *I don't know.*

I: What would make it more fun for you?

S: *That we could have so much fun learning all these new words.*

I: Did you like playing Hebrew language games? Why?

S: [shakes head yes]

I: Why?

S: *'Cuz it's fun. It's really really fun.*

I: How was that different than the way you usually learn language?

S: *That a few games you don't have to say it in Hebrew and a few games you do.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yeah.*

I: Why?

S: *'Cuz it's fun to learn how to play new games.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *When we played games.*

I: Why?

S: *Because if we didn't know how to play one game, you're gonna have to repeat it and we're not gonna listen.*

Student ID: 38

I: Is learning Hebrew language interesting or boring? Why?

S: *It's not like interesting but sort of interesting, not so interesting for me but it's not boring because my cousins know Hebrew. I really like to learn Hebrew but it's not so interesting.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *My mother doesn't like me to, but I do sometimes. She doesn't like it that the siddur play is Hebrew because one of my friends' teachers said it's like speaking Spanish, they don't know what they're saying.*

I: What about in the classroom?

S: *Sort of, because I don't like to sing in front of a lot of people*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *Fun, because I'm going to my cousins in Israel. It's not not fun.*

I: What would make learning Hebrew language more fun?

S: *Like we do everything and we don't have to make a sentence.*

I: What would you do instead?

S: *Like do this game [pointed to a sample Hebrew game on the table].*

I: Did you like playing Hebrew language games? Why?

S: *Yeah, without making sentences because I get to spin and put stuff on [the dress up paper dolls in the game].*

I: How was that different than the way you usually learn language?

S: *Because sometimes you have to make sentences and sometimes you just say stuff and we have to say what that means.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: *Yes, because I like playing games and I don't really like speaking too much because at home I'm a big speaker.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *I don't really know a lot of Hebrew. The same. Actually, I don't know. Actually, I feel like I'm singing when I play games, it's softer and kind of smooth.*

Student ID: 39

I: Is learning Hebrew language interesting or boring? Why?

S: *Interesting, because you learn.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: [nods head yes] *Because it's fun.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: [shakes head no]

I: What makes learning Hebrew language fun/not fun? Why?

S: *Because we could learn more better.*

I: What makes it not fun?

S: *That we don't learn.*

I: What would make learning Hebrew language more fun?

S: *When Morah teaches us.*

I: Did you like playing Hebrew language games? Why?

S: [nods head yes] *They're fun.*

I: How was that different than the way you usually learn language?

S: [shakes head no] *We learn and we play.*

I: And usually with Morah what happens?

S: *We learn.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [nods head yes] *I know it better.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Without games, because we figure it out ourselves.*

Student ID: 40

I: Is learning Hebrew language interesting or boring? Why?

S: *Very interesting. I don't really know Hebrew and want to learn it.*

I: Do you like singing songs in Hebrew, like the song *מה המילה*? Why or why not?

S: *Hmmm.* [shake head yes] *Because I'd rather learn things than to learn it.*

I: And singing helps you learn it?

S: *Yes.*

I: Is there anything about learning Hebrew language that you don't like? Why?

S: *No.*

I: What makes learning Hebrew language fun/not fun? Why?

S: *That I could speak Hebrew.*

I: What makes it not fun?

S: *There's nothing that's not fun.*

I: What would make learning Hebrew language more fun?

S: *I could do math in Hebrew. I could do like things in Hebrew.*

I: So, you're saying if you could actually use the Hebrew language?

S: [shakes head yes]

I: Did you like playing Hebrew language games? Why?

S: *Yes. It was a lot of fun. Whenever I spinned I learned what is a tza-eef [scarf], a me'eel [coat] kefafote [mittens].*

I: How was that different than the way you usually learn language?

S: *It's a game; it's not real words you're actually gonna say.*

I: Did you enjoy learning Hebrew language more when using games? Why/why not?

S: [shakes head yes]. *It was fun to learn the Hebrew. Whenever I learn Hebrew words, I can learn it by single words or I can learn it by playing.*

I: Did you feel that you knew the words better when you played games or when you learned without playing games? Why?

S: *Better when I played games. If I learned Hebrew by saying words you don't see what it means.*

I: Tell me more.

S: *When I play this game and I spin this spinner, and I get kefafa [mitten], I can see what a kefafa is.*

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