Tal Am: A Natural Approach to Hebrew Language Acquisition

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In light of recent neuro-scientific research on brain-based learning and applied research on language instruction, it is imperative that we reconsider our approach to Hebrew teaching in Jewish day schools. In this paper, we will examine ways in which this research has been incorporated in our development of the Tal Am curriculum. We will discuss the significance of the age variable, instructional design, methods of instruction, types of pedagogic materials, and the learning environment. We will also relate to the potential tension in Hebrew language instruction between Hebrew as a communicative language and Hebrew as a heritage language. Concrete examples that demonstrate the implications of the research for Hebrew curriculum development will be incorporated.

The Process of Curriculum Development

Our curricular goal in developing the Tal Am program was to create an alignment between educational theory, learning materials, school culture and classroom practice. In order to ensure an effective correlation between theory and practice, we embarked on a six-stage process that began with a study of current research. Our second step was to examine the theoretical assumptions in light of an empirical study of the field of Hebrew and Jewish studies in day schools throughout the Diaspora. This empirical research involved an examination of five elements of day school education: 1) instructional characteristics of the teachers; 2) learning outcomes of the students; 3) environmental conditions including time allotment, physical environment, curricular priorities of the various stakeholders in the school, etc.; 4) the formal curriculum; and 5) the actual learning process that takes place in the school. Our third step, the subsequent development of the curriculum and of related pedagogic materials, has taken into account both the theoretical foundation and the reality of the field. The fourth step in the process, the piloting of the program with a feedback loop, tests whether the desired outcomes are achieved, providing valuable information for the fifth stage, the rewriting of the program in a manner that ensures the optimal balance between the ideal and the reality.
The final stage, the Tal Am Institute, provides intense professional development to prepare teachers for proper implementation of the program. Through this process, we hope to ensure that the program does not strive for unattainable goals based only on theory, but also that its development will not be subordinated to and stifled by "reality". On the contrary, in some ways, the process has effected paradigm shifts in our participating schools, creating a new reality. For example, our survey indicated that 90% of day schools begin Chumash study with Parshat Lech Lecha, focusing on a technical approach of how to learn Torah. Our reading of the research, however, mitigated that we begin with Parshat Breishit using a natural "limud mitoch limud" approach. This decision was based on a recognition that Parshat Breishit includes vocabulary and concepts that are the basis of much of the tefillah and shabbat and holiday practice, and are also important elements of communicative Hebrew. Our decision to begin with Parshat Breishit has been subsequently validated by our test schools during the three-year pilot testing process. Another example was our commitment to create full alignment between the various components of the day school curriculum - modern communicative Hebrew, Torah, and Tefillah - that impacted significantly on our development of vocabulary and language patterns, learning skills, and thinking skills. Our pilot schools have come to recognize that this alignment results in the acceleration of learning in both quality and quantity.

**Hebrew: A Communicative- Heritage Language**

One of our first tasks was to define the type of Hebrew language that we would teach. A unique element of teaching Hebrew in the modern age is that it is both a communicative language and a heritage language. A heritage language is defined as a language other than the first language that has a particular family and cultural relevance to the learners[1], such as Latin for Catholics and Gaelic for the Irish. For centuries, Hebrew functioned only as a heritage language, serving as the key to sacred texts and religious practice. Many contemporary Hebrew curricula have separated the heritage function from the communicative function, either by divorcing the teaching of classical Hebrew texts and ritual practices from instruction in conversational Hebrew, or by translating classical texts into modern, conversational Hebrew. In addition to possible ideological factors, this approach has largely been based on the assumption that the linguistic structure and vocabulary of the heritage language is significantly different than that of the communicative language. In reality, however, there is a large degree of overlap between their structure and vocabulary. For example, more than 67% of communicative Hebrew roots flow from Biblical roots. This overlap mitigates for an integrated approach that teaches Hebrew as a communicative-heritage language. In addition, the heritage aspect of Hebrew language is an important variable in curriculum planning for Diaspora students. Hebrew for them should not be treated as a foreign language, as it does find expression in their homes, in their connection to Israel, and in their cultural milieu, and thus has inherent meaning in their lives.
The Tal Am curriculum integrates three components: 1) The Jewish Year, including daily conversation in the class, at home, and outdoors; 2) Tefillah and Parshat Hashavua; and 3) Torah. The heritage language is experienced through communication, reflecting an integration of content and skills. For example, the grade 1 curriculum includes a unit on the world around us (מה יש בעולם), which includes the basic vocabulary from Parshat Breishit. This vocabulary is repeated in grade 2 in the Torah curriculum, the study of creation in Parshat Breishit, and in the Tefillah curriculum in the study of Birkhot Hanehenin. It also appears in one of the grade 2 Succot library books that compares the Arba'at Haminim to parts of the body through which we appreciate the world that God created. Differences that exist between the heritage language forms and the communicative forms are bridged through tables in the Torah and Tefillah workbooks that connect the heritage form (כך כתוב בתורה) with the communicative form (כך אומרים בכיתה).

The integration between the heritage and communicative aspects of the language strengthens learning by harnessing and directing resources, and maximizing utilization of time.

Can Jewish Heritage Be Effectively Taught in Hebrew at an Early Age?
The decision to approach Hebrew as a communicative-heritage language also required a paradigm shift for some schools and educators. Many feared that the teaching of Jewish heritage in Hebrew at an early age would compromise the content of the Jewish studies. Our decision to adopt an integrated approach from grade 1 was based on our reading of the research on the age variable.

There has been much discussion in the literature regarding the optimal age of second language acquisition. [2] Recent brain-based research has cast a new light on the unresolved debate among applied researchers on this issue. Dr. Elizabeth Bates of the Center for Research on Language and Cognition (University of California, San Diego) claims that the optimal time for learning a second language is from the ages of five to ten years[3]. This is due to the fact that by this age, the brain has already learned the structure, syntax, and vocabulary of one language, and still has its new language architecture intact. This position is consistent with the linguistic interdependence hypothesis, which posits that success in second language mastery is related to competencies in the first language[4]. The window of opportunity for second language instruction coincides with the time that first language proficiency is sufficiently developed, and the brain structure is still aligned to acquire language effectively. The relationship between first and second language acquisition also suggests that instruction should approximate the developmental stages of first language acquisition[5]. On this basis, Krashen, Terrel and others advocate a natural approach to teaching young children language, inductively without exposure to rules and formal grammar[6].
The research convinced us of the importance of initiating an integrated approach to teaching Hebrew as a communicative-heritage language in the early elementary school grades, before the window of opportunity expires. The natural approach to language acquisition, indicated for instruction during the window of opportunity, is incorporated in the Tal Am elementary school curriculum[7].

Unique Language Patterns: The Argument Against Translation

The natural approach to language learning negates translation from the first language in second language instruction. The argument against translation in second language instruction is supported by the fact that language patterns in the first language are often different from prevalent patterns in the second language. For example, Hebrew includes several basic sentence structures: the nominal sentence (משפט שמני), such as אני דב or דב בכתה; the verbal sentence (משפט פעלי), such as אני אוכל or אני הולכת לכתה; the interrogative sentence (משפט שאלה), such as מי הולך לכתה or דב בבית?; the verbal infinitive sentence (משפט פעלי עם שם הפועל), such as אני רוצה ללכת or פרשת יולדת לכותב; and the conditional sentence (משפט תנאי) such as אם את רוצה... or אם דב יכול... In comparing these patterns to corresponding patterns in English, we find several differences. For example, the nominal sentence אני בכתה in English is "I am in the class". Similarly, a prevalent verbal sentence in English is "I am walking to the class." Students translating such sentences tend to search for a word in Hebrew to correspond to the word "am" that exists in the corresponding English sentence.

In order to foster natural acquisitions of Hebrew language patterns, each Tal Am unit focuses on specific language patterns that are introduced through a variety of modalities. Recognition and use of language patterns build in complexity in a spiral fashion through the introduction of positive-negative variations (i.e. "I am not going to the class"), singular-plural variations (i.e. "Dov and I are going to the class"), gender variations (i.e. "Sara and Vardit are going to the class"), and tense variations (i.e. "I went to the class").

The principles and methods for fostering second language instruction without the use of translation from the first language are examined in the sections that follow.
Language Acquisition vs. Language Learning
The natural approach to second language instruction distinguishes between language learning and language acquisition. Krashen claims that learning is a conscious attainment of explicit knowledge about language. Learning is developed by formal instruction and is thought to be aided by the practice of error correction. Examples of language learning are the memorization of verb conjugations or of dialogues. Language acquisition, on the contrary, is subconscious in two ways: 1) The process is subconscious – i.e. we have the impression that we are doing something else such as having a conversation or reading a book; and 2) The knowledge is subconscious – i.e. we are not always aware that we have learned something. For example, native speakers, who learn language through natural interactions with others, often do not know language rules[8].

Krashen's hypothesis is consistent with brain-based research, which indicates that the human brain possesses a language instinct[9]. That is to say, the human mind is biologically structured to recognize and internalize countless patterns of syntax and grammar without any formal teaching. The brain is, so to speak, a pattern identifier or seeker. Krashen claims that although, according to research, grammatical structure develops naturally in a predictable order, grammatical sequencing in instruction might be harmful to language acquisition[10]. Knowledge of the order is helpful in order to understand the errors that students make, to set expectations accordingly, and to select appropriate didactic material. Yet, there is no need to "teach" according to the order, as the brain itself creates the order.

In the Tal Am program, natural acquisition of Hebrew is fostered through exposure to authentic language usage. Vocabulary and language rules are not learned or drilled out of context. In addition, the language structure in the learning materials is not artificially limited to one verb tense. On the other hand, color-coding and the use of symbols give students clues to linguistic patterns. For example, masculine gender words are coded in green and feminine words are coded in brown. Similarly, past tense verbs are coded in red while the future tense is coded in blue. Thus, for instance, the word רבד in the student Torah workbook might appear as רבד, indicating that the "vav" makes it a past tense verb and that it is masculine.

The Silent Period
One important characteristic of natural language acquisition is what Krashen refers to as the "silent period" - that we refer to as the period of "active listening" - in which the learner does not yet speak[11]. During this period, the learner is developing competence by processing language input through listening and understanding. Generally, second language instruction does not allow for a silent period. Rather, the classroom environment insists on production, and accurate production, right away. This results in over-reliance on memorization and/or a forced reliance on the first language, including utilization of its linguistic structures and translating from its vocabulary and phraseology. Incorporation of the silent period in second
language teaching does not mean that students do not speak or respond. On the contrary, they are actively involved through verbal and non-verbal response. Rather, they are not called upon initially to create language. Thus, in the Tal Am curriculum, each unit is structured sequentially in a multi-step process that includes exposure to the primary theme through various modalities to begin the acquisition process, followed by: 1) a period of active listening that includes a focused presentation of information and demonstration; 2) a period of active participation that includes activities designed to foster internalization; and, only then, 3) expressive creative language activities.

What Type of Learning Materials Foster Natural Language Acquisition?
A natural language acquisition approach implies that rather than teaching the second language through grammar rules or by translating vocabulary into the first language, we should facilitate the input of authentic language, i.e. the language of native speakers. Biological evidence suggests that the brain thrives on high volume input[12]. Traditionally, second language education has utilized contrived learning material that is controlled both in terms of volume and in terms of structure (i.e. specific verb tenses, etc.), combined with the learning of associated language rules through repetitive drills. The evidence supports the opposite approach - that language acquisition is facilitated by exposure to a large amount of authentic language input.

High volume input does not mean a totally uncontrolled presentation of material. We have found that high volume input is most effective when materials are grouped based on a primary linguistic pattern and a common basis of content and vocabulary. As indicated above, integration allows vocabulary and content to be revisited in all areas of the curriculum. Tal Am students are provided in all curricular areas with a variety of textbooks, workbooks, CDs, interactive posters, big books, games, and library books that build upon one another in a systematic way. As we mentioned previously, the learning material in a particular unit will be unified according to the basic linguistic structures that characterize Hebrew, with a sequential increase in their complexity. Language input is formatted, based on brain-based learning research, in a manner that helps students make connections between materials in the various stages of the unit.

In addition to providing high volume input, pedagogic material must simultaneously meet the criteria for high quality input. Krashen contends that the most important element of input quality is meaning, that children and adults use language in order to transmit or receive meaningful messages. Krashen's hypothesis was verified by Fred Genessee's research on French immersion programs in Quebec. Genessee found that increased hours of French instruction mandated by the government did not result in higher levels of achievement when only hours of language instruction were increased. However, when increased instruction in
French was implemented through the teaching of other subjects, such as science and social studies, in French, language outcomes improved without hampering achievement in the subject area. [13] Thus, the content, rather than the language structure, should be the most important guiding factor in the selection of pedagogic material. Individuals do not take interest in information that they already know. Therefore, didactic material for second language instruction should be one step beyond the current level of the student, or as we term it: level + 1. Students acquire language by going for meaning, focusing on what is said in addition to how it is said. As Krashen states: "We do not acquire by first learning the structure of the language. We try to understand the message, and structure is thereby acquired." [14] As such, the sequential high volume input provided must also sequentially introduce new levels of meaning for the students.

The Tal Am program is based on the assumption that meaningful messages and communications are the leading motivators in heritage language development and usage. Students are provided with high quality input relating to their Jewish life. For example, in their study of the Haggadah, third grade students are challenged to consider whether each component of the seder ritual reflects servitude (avdut), freedom (herut), or both, and to explain why they think so, a task that involves higher levels of thinking. Similarly, in studying Parshat Vayera, students are asked to consider why Avraham tried to save the evil people of Sedom along with the righteous inhabitants. After considering such engaging questions themselves, the students can compare their opinions to those of students in the virtual class in the textbook. Some of these themes are carried over to the stories in the library books. By deriving meaning from the text that has relevance to the lives of the students, the level +1 criterion is satisfied.

**Error Correction**

Language acquisition and language learning represent two complimentary and interdependent processes for developing ability in a second language. The possible interrelationship between these two processes is described by Krashen in what he calls "The Monitor Hypothesis"[15]. While conscious learning does not contribute to fluency, Krashen claims that it can be used to edit or monitor. That is to say, we can use conscious learning to make corrections, to change the output of the acquired language before or after expression.

Error correction is a critical element of natural language acquisition. In realizing the ultimate goal of natural language instruction, independent language creation, student errors are inevitable. As such, teachers should not consider mistakes to be negative or frustrating. On the contrary, they should be happy when students make mistakes as it reflects that they have progressed to the level of creative expression. The way in which we deal with error correction can enhance or retard natural language
acquisition. It is important that error correction take place at the appropriate time in the language development process. Premature error correction, prior to the point at which the student's ideas have been crystallized, can hamper communication. Furthermore, error correction that is perceived as an evaluation can create feelings of anxiety, leading to a reticence that blocks creative expression. Natural language instruction demands error correction that is itself perceived as natural.

The goal of error correction is for students to internalize the correction and incorporate it in their linguistic expression. A common practice is for teachers to correct the errors of their students in oral or written expression. Nevertheless, very often the students repeat the same mistakes in spite of the correction. In order to enable students to internalize the correction, we must develop a self-correction mechanism in the learners. This can be facilitated by training students to check and correct their own work by comparison with the work of other students or paradigms that are posted in the classroom or printed in the book. The development of this monitoring skill requires six conditions: 1) the learner is aware that he is to check himself; 2) the learner must be given enough time to review and edit his work; 3) the correction must be at the appropriate time in communication development; 4) the learner must correct himself according to benchmarks that are established as part of the learning; 5) the learner must be focused on form, or correctness; and 6) the learner must be given feedback with regard to his correction.

In addition to the language acquisition approach, the Tal Am program includes a language learning component. To illustrate, students are provided with charts of relevant linguistic patterns when working on comprehension or expression activities. For example, students working on an activity that requires the manipulation of verbs in the creation of a paragraph are provided with charts that demonstrate the template for relevant language patterns and their variants that appear and are needed in the learning activity. Learners are trained to edit and monitor their acquired language, writing, and spelling skills by utilizing what they have consciously learned. They are encouraged to compare their responses with those of other students, or to utilize charts to check their accuracy. Workbooks include activities for self-evaluation in the development of communicative skills.

A Supportive Environment for Language Acquisition
Another important element of second language acquisition relates not to instruction, but to the environment in which the instruction takes place. Particularly, it is important to remove environmental barriers that hinder language acquisition. The research in second language acquisition indicates that reduced levels of anxiety, and a "can do", "let's try" mentality impact positively on language acquisition[16]. This is consistent with brain research, which suggests that emotions are intertwined with cognition. Dhority and Jensen posit that emotions drive attention, memory and meaning, and claim that both excessive emotion and
lack of emotion can impair language acquisition[17]. Although Piaget advocated that stress associated with "disequilibrium" is a positive and necessary element of learning, undue stress is counterproductive, particularly with regard to language acquisition. As Dhorty explains: "Each of us knows what it is like to feel threatened or stressed. Both experiences change the body's chemistry and impair learning. The brain's response to fear is a shifting of its priorities resulting in more simplistic and inhibited patterns.... Risk-taking is a critical ingredient to the process of second language learning, and classrooms or social conditions that do not feel safe are not conducive to taking risks." [18] One important element in reducing stress is that there not be too large a gap between learning materials and the level of the students. Such a gap can create induced helplessness.

The creation of a positive learning environment is fostered in a number of ways in the Tal Am program. Teachers utilizing Tal Am are required to participate in a professional development program that, among other things, trains them to enhance student learning by creating a positive, supportive, joyful, and challenging environment unburdened by anxiety, tension, criticism and/or indifference. Aesthetically pleasing and functionally illustrated books, attractive interactive wall posters, and audio discs accompany the curriculum. These environmental factors accompany the student to his/her home as they are incorporated in home learning materials as well. The varied activities incorporated in Tal Am are geared to target the multiple intelligences defined by Gardner[19] so that all students experience success. Play is frequently incorporated into the learning process, as is music that both manifests proper language structure and reinforces content. The "total physical response" advocated by Asher is utilized to create congruency between movement and language. [20] Instruction takes place in a variety of modalities including frontal teaching and a variety of discovery and cooperative learning strategies. In addition, emotional intelligence is fostered in the curriculum by having students focus on the feelings of characters that appear in the stories. For example, in their study of Torah and other themes, students are often asked to indicate what they think the various characters in the story are feeling.

Conclusion
The feedback that we have received to date from the implementation of Tal Am 1 and the piloting of the Tal Am 2 and 3 programs has confirmed the efficacy of the approach that we have outlined. Hebrew language is the key that unlocks Jewish heritage for our students, and provides them with a level of communicative literacy that allows them to be part of a world Jewish community with Israel at its center. By providing our students with disciplined based learning in aligned tracks based on current educational theory during their elementary school window of opportunity, we can not only enhance their acquisition of Hebrew, but also ensure the quality of their Jewish education.
For years, the commonly held belief was that young children could more easily acquire a language than could older children and adults (McLaughlin, p. 177-178). In the 1970’s, however, this notion came into question. Research indicated that while young children performed better in the learning of phonology, adolescents and adults were superior on measures of morphology and syntax. Reactions to this research varied. Krashen, Long, and Scarcella hypothesized that although adolescents and adults acquire morphology and syntax faster than young children, child learners ultimately attain higher proficiency levels. Others tried to discredit the research by claiming that it reflects only the fact that instructional techniques used for young students are inappropriate. McLaughlin rejected this argument, however, claiming that testing results were the same for students who studied in second language immersion programs. While acknowledging that, all things being equal, older students are more effective language learners, Genessee demonstrated that early immersion students achieved superior second language proficiency than delayed immersion students. In general, he concluded, that early exposure and extended exposure are associated with higher levels of second language proficiency.

The linguistic interdependence hypothesis suggests that older learners, whose ability to deal with literacy related language is more developed, might acquire cognitive/academic skills characteristic of traditional second language instruction more easily than younger learners. This would not necessarily be true of context-embedded aspects of second language. If so, the theory and the research would suggest different instructional approaches for different age levels.

Research suggests that after the age of ten, when countless brain neurons and synapses have been pruned away from their original intended function, different approaches must be employed. We must consider the implications of this research not only for novices over the age of ten, but also for the continuation of second language instruction for students who began their second language learning during the window of opportunity. This issue, however, is beyond the scope of this paper.


[18] Krashen hypothesizes that affective variables impact more on subconscious language acquisition than on language learning. (Krashen, op. cit., p. 60).
