UNIVERSITATEA „ALEXANDRU IOAN CUZA" DIN IAȘI

FACULTATEA DE LITERE

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Titlul tezei

Achiziția vocabularului limbii engleze într-un mediu zoologic de către elevi de liceu cu dificultăți de învățare

Rezumatul tezei de doctorat

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Prof. univ. dr. habil.   Tania Goldreich

Dana Anca Cehan

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High School Students with Learning Difficulties Acquiring Vocabulary in EFL Within a Multi-Animal Environment

Doctoral thesis summary

PhD Advisor:

Professor Dana Anca Cehan, PhD

PhD Student:

Tania Goldreich

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This research emerged from the author's work as an English as a foreign language teacher at a special education high school located within the Safari Park in Ramat Gan, Israel. The unique nearby setting of the multi-animal environment offers an emotionally supportive, multisensory setting for learning that has proven to be particularly beneficial for students with learning difficulties (LD). Over time, the researcher observed that students taught in this environment not only improved their vocabulary and speaking skills, they also showed more willingness to learn and speak English and their foreign language anxiety (FLA) decreased.

Chapter I: Introduction

The BE Safari school serves students in grades 7–12, many of whom face challenges such as dyslexia, ADHD, and other language-processing difficulties. Its small classes and individualized approach focus on boosting the students' self-efficacy (SE) through experiential, nature-based learning. The setting allows teachers to integrate animals and learning outdoors into academic subjects, which makes acquiring EFL feel more authentic and meaningful.

The study was driven by the premise that EFL approaches may not fully meet the needs of students with LD, and that animal-assisted, ecological learning could offer an innovative, more inclusive alternative. While there is separate research on teaching EFL and students with LD, few have explored the idea of teaching English within a multi-animal environment to students with LD. This study helps to fill that gap.

The primary aim and design of my research was to examine how an intervention program integrating a multi-animal environment can:

1. enhance EFL learning, focusing on vocabulary and basic speaking skills;
2. reduce FL anxiety among high school students with learning difficulties (LD);
3. enhance self-efficacy among middle school and high school language learners with learning difficulties.

My research aims to answer the following questions:

1. How does an intervention program which integrates multi-animal environment affect the acquisition of vocabulary and basic speaking skills in English of students with LD?

2. How does an intervention program which integrates a multi-animal environment affect the level of FL-anxiety among students with LD?
3. How does an intervention program which integrates a multi-animal environment affect the level of self-efficacy in EFL among students with LD?

The thesis consists of seven chapters, including an introduction, a literature review, presentation of the intervention program, methodology, findings, a discussion, and conclusions.

Chapter II: Literature Review

The literature review outlines the theoretical and educational basis behind the intervention program aimed to help high school students with LD to acquire vocabulary and basic speaking skills in EFL. It examines how Israel's education system defines and addresses LD under the Special Education Law (1988), which mandates Individualized Education Programs (IEPs) tailored to each student's needs and level.

The Ministry of Education introduced reforms aimed at providing early, targeted support for students with LD. The reforms focus on ongoing assessment and adapted support according to the student's progress, rather than on IQ tests (Ministry of Education, 2017). Tools have been developed to help English teachers identify students at risk, but these are often underused due to time and resource constraints. This updated approach reflects a broader shift toward defining LD as challenges in acquiring academic skills despite average intelligence and appropriate instruction (Shemer et al., 2016). English learning is mandatory from elementary school through 12th grade. The current 2020 revised curriculum published by the Ministry of Education's English Department aligns with CEFR (Common European Framework of Reference) standards and emphasizes vocabulary frequency lists, spoken fluency, and intercultural communication, but, the reforms do not fully address the distinct challenges that students with LD face (Rom et al., 2009). Vocabulary is essential, as students need a strong base of word knowledge to understand texts and continue to learn new words effectively (Laufer, 1997).

Students with LD often face ongoing challenges in learning English, due to a combination of linguistic coding issues, cognitive differences, emotional issues, and mismatches in instruction. (Sparks & Ganschow, 1993). The linguistic contrast between Hebrew and English, especially in morphology, makes EFL learning even more complex for these learners (Bick et al.,

2011). As students learn in different ways and there are multiple intelligences (Gardner, 2003), teachers are encouraged to support learners by tailoring to their strengths and using differentiated instruction. The one-size-fits-all approaches are ineffective, especially for students with LD.

FLA was identified by Horwitz et al. (1986), and refers to anxiety uniquely triggered by language learning. Students with LD are particularly vulnerable, as they often have a history of academic failure and heightened sensitivity to making mistakes (Chen & Chang, 2004). Pressure to perform, perfectionism, and an unsupportive classroom atmosphere can worsen anxiety (Alnuzaili & Uddin, 2020). Teachers play a central role in detecting nonverbal signs of stress (Gregersen, 2007) and in creating unthreatening, emotionally supportive classrooms.

Trait anxiety is a stable personality trait that makes individuals more prone to feel anxious in a variety of situations, including foreign language use (Spielberger et al., 1971). In contrast, state anxiety is a temporary response to specific stressors, such as speaking in front of the class. Situation-specific anxiety is a recurring form of state anxiety triggered by particular contexts, such as group discussions or oral presentations in a foreign language.

The concept of *willingness to communicate* (WTC), especially in the context of L2 acquisition, was developed and formalized by MacIntyre et al. (1998) and is closely linked to anxiety. They proposed a pyramid model showing how factors such as anxiety, self-confidence, motivation, and personality traits, influence a learner's willingness to speak in a foreign language. Studies suggest that student readiness plays a key role in whether they use English in meaningful ways, as it can strongly influence their WTC (Wang et al., 2022).

Self-efficacy (SE), defined by Bandura (1977) as the belief in one's ability to succeed, is also a major factor in language learning. This is particularly important for students with LD, who may have low confidence (Klassen & Lynch, 2007). Teachers can help boost SE by offering mastery experiences and encouragement, modeling success, and fostering a positive emotional environment (Bandura, 1977). Dweck's mindset theory complements this view by showing how beliefs about ability affect motivation and resilience (Dweck, 2000).

In order for students to regard progress as attainable and be able to communicate in English , vocabulary knowledge is essential. Vocabulary is central to communication and must be taught clearly to students with LD. These students often lack the reading habits and skills that support building a vocabulary, and they benefit from structured methods like semantic mapping, repetition, and multisensory activities (Webb, 2020). Communicative Language Teaching (CLT),

grounded in Hymes's theory of communicative competence, emphasizes meaningful use of language over grammar drills (Richards & Rodgers, 2014).

CLT shares principles with the Direct Method, which emphasizes oral interaction, vocabulary that can be put to use in real life (Larsen-Freeman & Anderson, 2013). For learners with LD, these principles align well with activity-based instruction that uses hands-on, context-rich engagement to reinforce vocabulary (Griva et al., 2010). The Natural Approach (Terrel & Krashen, 1983) also supports the study's intervention program. It promotes comprehensible input, reduced pressure to speak, and an emotionally-safe learning environment, all beneficial for LD students. Total Physical Response (TPR), a method often used in the Natural Approach, uses physical actions to teach listening and vocabulary, which supports comprehension before speech (Asher, in Richards & Rodgers, 2014). These methods rely on visual and physical cues, reduce anxiety, promote gradual language acquisition.

Outdoor activities improve attention, feelings of empowerment, and emotional regulation, key elements for students with LD. It also aligns with Krashen's affective filter hypothesis by creating calm, low-pressure environments (Kuo et al., 2019). Community Language Learning (CLL), a humanistic method that emphasizes empathy and shared experience, aligns closely with Nature Pedagogy. Developed by Charles Curran, CLL fosters emotional security and peer collaboration. Nature Pedagogy, promoted by Claire Warden (2015), encourages exploration, connection with the environment, and student agency, making it highly compatible with the Safari Park setting of the intervention program of this research.

Bronfenbrenner's ecological systems theory further supports this approach by emphasizing how interconnected layers of the environment affect development (Bronfenbrenner & Morris, 2007). In the Safari Park, the physical setting, peer relationships, and interaction with the animals all contribute to learning. Van Lier's eco-social approach extends this framework to language learning, viewing language as part of a lived, relational experience (Van Lier, 2010). By offering nonjudgmental companionship, animals help students to build trust and become more confident with group settings, which promotes stronger relationships with classmates and greater participation in class activities (Pendry & Vandagriff, 2019). The socio-cognitive theory combines these ideas by viewing learning as shaped by social interaction and emotion. Nature and animals create rich "affordances," opportunities for language use, through authentic

engagement (Atkinson et al., 2018). Emotional connection and reduced anxiety make it easier for students to communicate, build their vocabulary, and feel confident.

Chapter III: The Intervention Program "You Can Zoo It!"

The Intervention Program "You Can Zoo It!" (YCZI) was developed by the author as a practical response to the CEFR's "can-do" statements and Israel's national English curriculum. It was developed for low-proficiency ninth-grade students, most of whom were emergent or nonreaders, aimed to enhance vocabulary acquisition and basic speaking skills in English without focusing on reading or writing. When reading tasks were necessary, instructions were read aloud and responses were supported as needed. The intervention program was aligned with the 3-point English matriculation requirements and designed around three core pillars: (1) vocabulary and speaking skills advancement, FLA reduction, and self-efficacy enhancement; (2) an animal-based learning environment at the Safari Park; and (3) strategies tailored to students with LD. Theoretical support came from the Direct Method (Larsen-Freeman and Anderson, 2013), the Natural Approach (Terrel & Krashen, 1983), and the ecological systems theory (Van Lier, 2010).

Learning in the Safari Park made it possible to learn outdoors in close proximity to the animals, and to thereby engage the students in meaningful interactions with animals that nurtured curiosity, emotional connection, and an alternative path to learning. Many of the students had already experienced failure in English and had high anxiety (Horwitz et al., 1986) and low self-efficacy (Bandura, 1977). The program was designed to offer almost immediate experiences of success, to use peer success and encouragement, and teach emotional regulation, all of which Bandura (1977) identifies as necessary for increasing self-efficacy.

All ninth-grade students at the school at the lowest English level, equivalent to CEFR A2, participated in the program. Most of them had previously received little effective English instruction due to other, more urgent learning requirements. Due to the students' limited abilities in English, pre-intervention assessments were performed accordingly. No explicit reading or writing skills were taught through the intervention program, which was held between September 2024 and March 2025. Due to national events, it was initially postponed.

In line with Israel's English Curriculum and CEFR guidelines, lessons used an action-oriented approach and incorporated authentic, often communicative tasks. This was very relevant to the students, especially those with dyslexia and ADHD, who benefited from meaningful, multisensory experiences. Lessons were held outdoors in various parts of the Park. English was used throughout the program to communicate, flashcards and realia were used instead of textbooks, and animal and visual prompts were incorporated into the lessons. Students were not pressed to participate and errors when speaking were not corrected. Lessons began with a review and ended with a summary, according to the Presentation, Practice, and Production (PPP) model (Richards & Rodgers (2001). The YCZI program introduced vocabulary gradually and in stages: firstly one word, then two-word phrases, followed by three-word sentences. The initial concept was to use cognates, which are words that sound similar in the students' L1. The students are already familiar with them and can produce them. This boosts confidence to progress. Using cognates provides the students with a sense of accomplishment that translates into self-efficacy; into feeling that they really can do it! And from there to the intervention program You Can Zoo It!

Vocabulary was introduced in stages: (1) cognates (e.g., *zebra, banana*) to boost confidence; (2) adjectives (e.g., *big, happy*), colors, numbers; and (3) verbs (e.g., *eating, running*) demonstrated using flashcards or by observing animals.

All lessons included exposure, repetition, and practice, supported by storytelling from Lesson 10 onward (Jitendra et al., 2004). Each story incorporated visuals and pre-taught anchor words to encourage focused listening. To align with the aims of reducing FLA and enhancing SE, lessons were tagged accordingly. Modeling and demonstration by the teacher were clearly marked as "M&D".

Chapter IV: Research Design and Methodology

the research approach was action research, and a mixed method research as a component of the action research. The study combined quantitative pre- and post-intervention measures with qualitative insights from semi structured interviews and a teacher diary in order to explore both measurable outcomes and the students' lived experiences (Creswell & Clark, 2017). Ethical considerations were carefully observed due to the vulnerability of the population. All research

tools were presented in Hebrew with verbal support. Confidentiality and respect for the students'
well-being were maintained throughout. The research followed the principles of action research
and emphasized reflective teaching and change within real-life settings (Whitehead, 1989). It
drew on Mackey and Gass's (2015) call for methodology aligned with authentic language use,
and McNiff's (2013) view of teacher-led inquiry rooted in personal values. In EFL specifically,
this model is also based on the work of Burns (2009), who promotes action research as a
practical tool for language teachers.

The study incorporated a mixed-methods design (Creswell & Clark, 2017) and integrated
three quantitative tools, adapted for the study: a skill-based vocabulary test, a FLA questionnaire
(Horwitz et al., 1986), and a self-efficacy questionnaire (Chen et al., 2001). The vocabulary
skilled-base test was tailored to suit the needs of students with LD and included elements directly
relevant to the "You Can Zoo It!" program. Interviews were conducted in person in Hebrew and
transcribed for thematic analysis (Clarke & Braun, 2017). The teacher diary provided ongoing
reflection that enriched both the interpretation of the data and the design of future program
cycles (Burns, 2009).

Chapter V: Findings

In the findings, the quantitative analysis indicated significant improvements in the skills
of recognizing vocabulary meaning and vocabulary production in speech following the
intervention, while vocabulary production in sentence composition showed no statistically
significant change. These results suggest that the immersive, multisensory, animal-assisted
environment promoted both receptive and oral vocabulary growth, although the more structurally
demanding skills required for sentence composition may require more time and teaching focus to
yield significant results (Creswell & Clark, 2017).

The FLA scores revealed a statistically significant reduction (Wilcoxon signed-rank test,
$p = .008$, $r = 0.69$), with 83% of the students reporting decreased anxiety post-intervention.
Qualitative data from interviews supported this finding, with students describing feeling
emotionally secure and a reduced fear of making mistakes as central factors. Categories that
emerged included the emotional security provided by the use of animals, the normalization of
imperfection, the reframing of English as a positive experience, and a shift in self-efficacy from

helplessness to agency. Such supportive, natural settings have been associated with more positive attitudes toward language use and increased WTC (Karatasareas, 2022).

The SE scores also showed statistically significant improvement ($p = .002$, $r = 0.36$), with 83% of participants reporting a growth. Interviews highlighted themes such as increased confidence, a sense of mastery, successful independent use of English, and a shift from being perceived as struggling learners to capable communicators. The supportive atmosphere and positive teacher feedback was significant in building the students' belief in their own abilities (Bandura, 1997) The teacher diary added rich qualitative context: It documented challenges such as adapting skill-based tests for students with LD and navigating scheduling difficulties. Students began to show compassion, curiosity, and openness, interacting naturally in English, even if only in short utterances. The diary notes helped to improve the lessons by highlighting what did and did not work, such as deciding to stop using phone cameras after the first few lessons, once it became clear that using phones in the park were more distracting than helpful for taking creative photos. The diary also highlighted (1) how emotional regulation, improved by the proximity to animals, helped facilitate learning; (2) the reduction in the students' resistance to learning English; and (3) an improvement in the students' self-belief (Burns, 2009).

Chapter VI: Discussion

The discussion draws on Krashen's input and affective filter hypotheses, and Bandura's theory of self-efficacy It connects theory with both quantitative outcomes and qualitative student feedback. The intervention led to significant gains in vocabulary knowledge and speech production, while in sentence composition, it showed more modest improvement, which likely reflects the persistent challenges students with LD face in composing a sentence (Wanzek et al., 2010). Modest gains in sentence composition ($M = 16.66$ to $M = 22.22$) likely reflect the limited instructional focus and the ongoing literacy challenges among students with LD (Wanzek et al., 2010). The intervention proved that language learning for students with LD can thrive when implemented in emotionally safe, engaging, and personally meaningful environments. Combining low-stress oral practice, relevant content, and emotional support, the program helped reduce anxiety, increase self-belief, and foster genuine communication in English.

Chapter VII: Conclusions

The evidence collected for this study allowed the emergence of the Improving Vocabulary and Oral Communication (IVOC) model, which can give EFL teachers an approach to teaching vocabulary and oral communication skills to students with LD studying in an animal or natural environment.

The Improving Vocabulary and Oral Communication (IVOC) Model
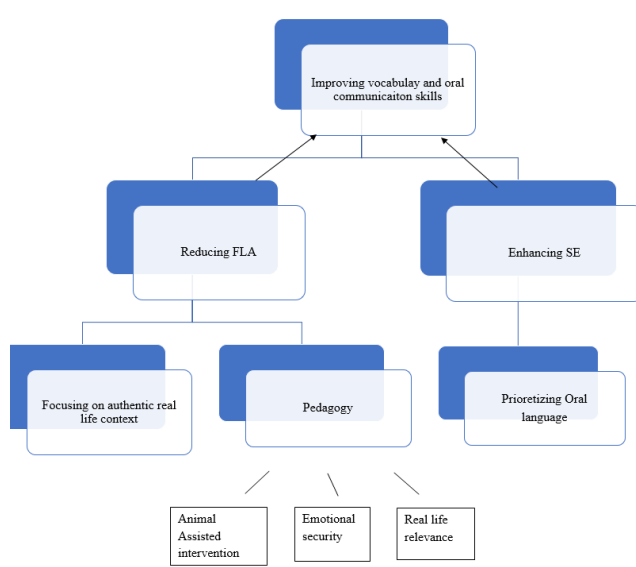
One of the most significant insights is the value of ecological and animal-assisted learning. Incorporating animals into the EFL classroom appeared to reduce anxiety and create a secure environment that encouraged engagement, curiosity, and self-efficacy. Teachers might explore how they can utilize other spaces such as petting zoos, farms, or natural outdoor spaces to promote both language development and emotional well-being.

Another important pedagogical implication relates to prioritizing improving oral language in authentic, relevant frameworks. The results also highlight the importance of reducing FLA. Echoing Krashen's theories, the study suggests that language learning thrives when students are not pressured into speaking prematurely or corrected in ways that heighten anxiety. The importance of building self-efficacy through mastery experiences is equally noteworthy. When learning was structured around attainable goals, and when students were given the opportunity to succeed repeatedly, they developed a stronger sense of competence. Careful

scaffolding, consistent positive feedback, and visible evidence of progress, all contributed to boosting the students' belief in their own capabilities.

Personalization emerged as another major factor in student motivation and success. Allowing students to choose their own topics or projects, such as doing a report on their favorite animal, gave them a sense of ownership over their learning and increased engagement. Finally, this study highlights the potential benefits of interdisciplinary and holistic teaching approaches.

Policymakers are encouraged to recognize the value of experiential, ecological, and animal and natural learning environments, and to provide funding for such programs in special education and EFL settings. Policymakers can play a major role in legitimizing and expanding these approaches by integrating them into national education and teacher training frameworks. Funding for these methods not only increases access, it also provides the necessary infrastructure for effective implementation. Curriculum designers should aim to develop resources that are flexible, personalized, and connected to real experiences in life, especially for learners who face educational challenges and LD. Finally, schools and communities can improve learning outcomes by forming partnerships with nature centers, animal organizations, and other institutions that provide authentic and emotionally rich environments.

The small sample size of students and the unique setting of a school located within a Safari Park may limit the generalizability of the findings. However, this rare environment enabled a rich, in-depth exploration of an innovative instructional model that could inspire adaptations elsewhere. The dual role of the teacher as researcher required careful attention to bias but offered rare access to student progress.

There is a need for longitudinal studies that explore the long-term impact of such interventions on English language retention, academic achievement, and personal development. Comparative studies could also be valuable in examining the differences between animal-assisted learning programs and traditional EFL instruction for similar populations. Such studies could help to isolate the specific benefits of ecological approaches. Future research should further explore how writing and sentence composition might be supported within animal-assisted or outdoor learning environments. In addition, studies focusing on the well-being and beliefs of teachers involved in these types of programs could offer insight into how such approaches affect their motivation, teaching practices, and perceptions of student potential.

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Selected Bibliography (shortened to 2 pages)

Alnuzaili, E. S., & Uddin, N. (2020). Dealing with anxiety in foreign language learning classroom. *Journal of Language Teaching & Research*, *11*(2).

Atkinson, D., Churchill, E., Nishino, T. & Okada, H. (2018), Language learning great and small: Environmental support structures and learning opportunities in a sociocognitive approach to second language acquisition/teaching. *Modern Language Journal*, *102*(3), 471-493.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191.

Bick, A. S., Goelman, G., & Frost, R. (2011). Hebrew brain vs. English brain: Language modulates the way it is processed. *Journal of Cognitive Neuroscience*, *23*(9), 2280-2290.

Bronfenbrenner, U., & Morris, P. A. (2007). The bioecological model of human development. In R.M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development (Vol. 1, 6th ed.)* (pp 793-828). John Wiley & Sons, Inc.

Burns, A. (2009). *Doing action research in English language teaching: A guide for practitioners*. Routledge. https://doi.org/10.4324/9780203863466

Chen, G., Gully, S.M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods, 4* (1), 62-83.

Chen, T.Y, & Chang, G.B.Y (2004). The relationship between foreign language anxiety and learning difficulties. *Foreign language annals, 37*, 279-289.

Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology*, *12*(3), 297-298.

Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications. https://doi.org/10.4135/9781506335193

Dweck, C. S. (2000). *Self-Theories: Their Role in Motivation, Personality, and Development*. Taylor & Francis.

Gardner, H. (2003). Multiple intelligences after twenty years. *American Educational Research Association, Chicago, Illinois*, *21*(617), 1-15.

Gregersen, T. (2007). Breaking the code of silence: A study of teachers' nonverbal decoding accuracy of foreign language anxiety. *Language Teaching Research, 11*(2), 209–221.

Griva, E., Semoglou, K., & Geladari, A. (2010). Early foreign language learning: Implementation of a project in a game–based context. *Procedia-Social and Behavioral Sciences*, *2*(2), 3700-3705.

Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern language journal*, *70*(2), 125-132.

Jitendra, A. K., Edwards, L. L., Sacks, G., & Jacobson, L. A. (2004). What research says about vocabulary instruction for students with learning disabilities. *Council for Exceptional Children*, *70*(3), 299–322.

Karatsareas, P. (2022). Semi-structured interviews. In R. Kircher & L. Zipp (Eds.), *Research methods in language attitudes* (pp. 99–113). Cambridge University Press.

Klassen, R. M., & Lynch, S. L. (2007). Self-efficacy from the perspective of adolescents with LD and their specialist teachers. *Journal of Learning Disabilities, 40*(6), 494–507.

Knesset (1988). *Sefer Hahukim: hok hinuch meyuchad* (Statue book: special education law]. Government of Israel.

Kuo, M., Barnes, M., & Jordan, C. (2019). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *Frontiers in Psychology, 10*, Article 305.

Laufer, B. (1997). The lexical plight in second language reading: Words you don't know, words you think you know and words you can't guess. In J. Coady & T. Huckin (Eds.), *Second Language Vocabulary Acquisition: A Rationale for Pedagogy* (pp. 20-34). Cambridge University Press.

Larsen-Freeman, D., & Anderson, M. (2013). *Techniques and principles in language teaching. 3rd ed.-Oxford handbooks for language teachers*. Oxford university press.

MacIntyre, P.D., Clément, R., Dörnyei, Z., & Noels, K.A. 1998). Conceptualizing willingness to communicate in a L@: A situational model of L2 confidence and affiliation. *The Modern Language Journal, 82* (4), 545-562.

Mackey, A., & Gass, S.M. (2015). *Second language research: Methodology and design* (2nd ed.). Routledge. doi.org/10.4324/9781315750606

McNiff, J. (2013). *Action research: Principles and practice* (3rd ed.). Routledge.

Ministry of Education Special Education Department Pedagogical Secretariat (2017). *RTI-response to intervention,* Special Education Department.

Pendry, P., & Vandagriff, J. L. (2019). Animal visitation programs in schools: An exploratory study of benefits on stress and social-emotional functioning. *Human-Animal Interaction Bulletin, 7*(1), 1–20.

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge University Press.

Rom, A., Zur, B., Kreiser, V. (2009). *Safa vekotz ba: Lekuyot tikshoret, safa vedibur etzel yeladim* [Communication, speech and language disorders in children]. Mofet.

Shemer, O., Rosenfeld, J.M., Dahan, O., & Daniel-Hellwing, A. (Eds.) (2016). *Ma be'etzem asinu? Sipurei hatzlachah mimercazei tmicha lestudentim im likuyei lemida* [What have we actually done? Success stories of support-centers for students with learning disabilities]. Mofet.

Sparks, R. L., & Ganschow, L. (1993). *Identifying and instructing at-risk foreign language learners in college*. Heinle & Heinle Publishers.

Spielberger, C. D., Gonzalez-Reigosa, F., Martinez-Urrutia, A., Natalicio, L. F., & Natalicio, D. S. (1971). The state-trait anxiety inventory. *Revista Interamericana de Psicología/Interamerican Journal of Psychology, 5*(3–4).

Terrell, T. D., & Krashen, S. (1983). *The natural approach: Language acquisition in the classroom*. Pergamon Press.

Van Lier, L. (2010). The ecology of language learning: Practice to theory, theory to practice. *Procedia-Social and Behavioral Sciences*, *3*, 2-6.

Wang, M., Wang, H., & Shi, Y. (2022). The role of English as a foreign language learners' grit and foreign language anxiety in their willingness to communicate: Theoretical perspectives. *Frontiers in Psychology, 13*, Article 1002562.

Wanzek, J., Wexler, J., Vaughn, S., & Ciullo, S. (2010). Reading interventions for struggling readers in the upper elementary grades: A synthesis of 20 years of research. *Reading and Writing: An Interdisciplinary Journal, 23*(8), 889–912.

Warden, C. (2015). *Learning with nature: Embedding outdoor practice*. SAGE Publications Ltd.

Webb, S., & Webb, S. A. (Eds.). (2020). *The Routledge handbook of vocabulary studies* (Vol. 2). London: Routledge.

Whitehead, J. (1989). Creating a living educational theory from questions of the kind, 'How do I improve my practice?' *Cambridge Journal of Education, 19*(1), 41–52.