Received Date: 26 July 2025 | Accepted Date: 01 September 2025

RESEARCH ARTICLE

OPUS Journal of Society Research

Exploring the Ecological Background of Learning Turkish as a Second Language: Insights from Zumbo's Framework

Elif Jamini[1], Talha Göktentürk[2]

[1] MA Graduate, Yıldız Technical University, Faculty of Education, İstanbul/Türkiye
ORCID: 0000-0002-8619-0698
E-Mail: elif.kilic096@gmail.com

[2] Asst. Prof. Dr., Yıldız Technical University, Faculty of Education, İstanbul/Türkiye
ORCID: 0009-0005-2819-936X
E-Mail: talhagoktenturk@gmail.com

Corresponding Author:
Talha Göktentürk

September 2025
Volume:22
Issue:5
DOI: 10.26466/opusjsr.1751709

Citation:
Jamini, E. & Göktentürk, T. (2025). Exploring the ecological background of learning Turkish as a second language: Insights from Zumbo's framework. *OPUS– Journal of Society Research, 22*(5), 982-1006.

Abstract

With increasing immigration, teaching Turkish as a second language has become a national educational priority in Türkiye. The rise in international students—particularly through programs such as Türkiye Scholarships—has intensified the need to understand the ecological factors shaping their learning. This study investigates the ecological background influencing Turkish language acquisition among students in public and private schools and Turkish teaching centers. Using Zumbo's ecological framework and a phenomenological design, it examines variables affecting the four core language skills—listening, reading, speaking, and writing—across layers from individual traits to broader national contexts. Data were gathered through semi-structured interviews with participants at four educational levels: primary, middle, and high school students, and adults. Thematic analysis showed that motivation, classroom strategies, teacher support, family engagement, and digital tool use interact across ecological layers to shape language learning. The findings underscore the distinct needs of each age group and the importance of pedagogical sensitivity. The study affirms the value of ecological perspectives in Turkish language education and offers practical recommendations for educators, policymakers, and researchers.

Keywords: *Turkish, second language learning, ecological framework, Zumbo*

Öz

Artan göç hareketleri ile Türkçenin ikinci dil olarak öğretilmesi Türkiye'nin öncelikli hedeflerinden biri hâline getirmiştir. Özellikle Türkiye bursları gibi programlarla gelen öğrencilerle birlikte ele alındığında farklı seviye ve grupların öğrenme süreçlerini etkileyen ekolojik faktörlerin belirlenmesine duyulan ihtiyaç artmaktadır. Bu sebeple çalışma devlet okulları, özel kurumlar ve Türkçe öğretim merkezleri gibi resmî kurumlara kayıtlı öğrencilerin Türkçe öğrenme süreçlerini şekillendiren ekolojik arka plana odaklanmaktadır. Zumbo'nun ekolojik çerçevesinden yararlanan araştırma kişinin şahsi karakterinden içinde bulunduğu topluma kadar geniş bir ekolojik çerçevede dört dil becerisinin öğrenimini etkileyebilecek değişkenleri keşfetmek amacıyla fenomenolojik desende tasarlanmıştır. Farklı eğitim kademelerini temsil edebilmek için ilkokul, ortaokul, lise ve yetişkinlerden oluşan 4 grupta yarı yapılandırılmış görüşmelerle veriler toplanmıştır. Tematik analiz bulguları ekolojik çerçeve ile uyumlu olarak öğrencilerin motivasyonu, sınıf içi stratejiler, öğretmen desteği, aile katılımı ve dijital araçların kullanımı gibi çok sayıda değişkenin ekolojik tabakalarda öğrenme süreçleri ile etkileşime girdiğini göstermektedir. Sonuçlar aynı zamanda her yaş grubunun kendine özgü ekolojik ihtiyaçları olduğunu vurgulamakta ve pedagojik gelişim süreçlerinin dikkate alınması gerekliliğini vurgulamaktadır. Ayrıca ekolojik çerçevenin ikinci dil olarak Türkçe öğretimi alanı için ihmal edilmez olduğuna işaret etmektedir. Bu yolla ekolojik çerçeve ikinci dil olarak Türkçenin öğrenilmesi için eğitimciler, politika yapıcılar ve araştırmacılar için pratik tavsiye ve teklifler sunmaktadır.

Anahtar Kelimeler: *Türkçe, ikinci dil öğrenimi, ekolojik çerçeve, Zumbo.*

Introduction

The global increase in migration has compelled host countries to design inclusive educational policies that accommodate diverse learners (McAuliffe & Khadria, 2019; Vézina & Bélanger, 2019). Türkiye, as both a transit and destination country, has seen significant growth in asylum seekers and long-term residents (Karapınar Kocağ & Longhi, 2022). Programs such as Türkiye Scholarships and curricular reforms (Aras & Mohammed, 2019) and curricular initiatives (Türkiye Maarif Vakfı, 2019) have expanded access to Turkish language education. Nevertheless, instructional practices often remain uniform, overlooking the complex social and cultural realities shaping learners' progress (Council of Europe, 2020; Uysal, 2021). A structured framework is therefore needed to capture these contextual dynamics and guide more responsive approaches to language teaching.

In Türkiye, where learner populations are highly diverse (Göktentürk, 2016; TÜİK, 2024) second language acquisition must be understood as a socially embedded process influenced by families, teachers, peers, and communities (Blyth & Thoms, 2021; Chong et al., 2023). In multilingual and migration-affected contexts, these interactions are shaped by distinct ecological realities including displacement histories (Gün & Tüzmen, 2021), access to resources (Ekşi & Demirkol, 2023), institutional support systems (Tanman & Özgenel, 2021), and cultural adaptation challenges (İnce Yakar & Fedai, 2022). Recognizing these multiple influences enables educators to move beyond generalized strategies and address the conditions under which different groups acquire Turkish.

Among the emerging frameworks, Zumbo's ecological lens offers a particularly promising approach (Göktentürk et al., 2023; Zumbo et al., 2015). Rather than viewing learning as an isolated or purely cognitive activity, Zumbo's model conceptualizes it as a phenomenon embedded within interacting ecological layers (Zumbo, 2017). These include (1) individual characteristics, (2) classroom and school environments, (3) family and non-school ecological factors, and (4) broader societal and national structures (Göktentürk, 2021). Each layer contributes uniquely to shaping educational experiences, and their interrelations can help explain why similar instructional approaches yield different outcomes for different learners (Sağlam et al, 2023). By analyzing how these layers converge, the framework explains why uniform instructional approaches can yield varied outcomes. In this study, Zumbo's model is applied to Turkish as a second language across different educational levels, aiming to reveal how ecological conditions both enable and constrain the development of Turkish language skills.

Although prior research has acknowledged various factors influencing second language learning (Çakar Turan, 2024; Demirel & Yalçın, 2021), few studies have examined their interactive effects through an ecological perspective, and none have applied Zumbo's model to Turkish language education. This gap limits the development of pedagogical strategies that reflect the realities of multilingual, migration-affected classrooms. Addressing this need, the present study investigates how ecological layers—individual, institutional, familial, and national—shape Turkish language learning. Specifically, it asks:

1. What is the ecological background of teaching Turkish as a second language at the primary school level in Türkiye?
2. What is the ecological background of teaching Turkish as a second language at the middle school level in Türkiye?
3. What is the ecological background of teaching Turkish as a second language at the high school level in Türkiye?
4. What is the ecological background of teaching Turkish as a second language at the adult education level in Türkiye?

Literature Review and Theoretical Background

Second language learning: Core concepts

The distinction between a second and a foreign language is central to understanding language acquisition. A second language is learned in environments where it is actively used for communication, whereas a foreign language typically remains confined to classroom contexts (Cook, 2016; Lightbown & Spada, 2021). In Türkiye, the concept

of "second language" has become increasingly relevant with the growing presence of long-term migrants, refugees, and international students who rely on Turkish across social and institutional domains (Aras & Mohammed, 2019; Dilek et al., 2018; McAuliffe & Khadria, 2019).

Within formal educational settings, Turkish functions both as the medium of instruction and a means of integration (Şimşek & Bozkırlı, 2024; Yılmaz, 2017). Unlike informal or heritage language acquisitions, curricular frameworks demand proficiency in language skills (Barın, 2004; Türkiye Maarif Vakfı, 2019). These skills develop interdependently, shaped by individual characteristics, instructional quality, and environmental factors (Chong et al., 2023; Griffiths & Soruç, 2021). Their dynamic interplay highlights the importance of adopting an ecological perspective that accounts for the varied learner backgrounds and contexts in which Turkish as a second language is acquired.

Theoretical Shifts in Second Language Learning

Second language learning theories have shaped Turkish language education through several paradigms—behaviorist, nativist, sociocultural, communicative, and action-oriented. Each perspective illuminates different dimensions of learning and contributes to a comprehensive understanding of how Turkish is acquired in diverse contexts.

Behaviorist theory, rooted in the work of Skinner (1986), views learning as habit formation through stimulus-response reinforcement (Mohamad Nor & Rashid, 2018). This paradigm informed early approaches to Turkish language instruction, particularly grammar-translation and audiolingual methods, where repetition and drilling were central to standard curricula (Powell et al., 2002; Yılmaz, 2021). Although criticized for neglecting meaning and interaction, its emphasis on structure still influences contemporary practices in controlled classroom environments (Amira, 2024; Yıldız Yalçın & Özdemir, 2025).

Nativist theory, pioneered by Chomsky (1965), argues that humans possess an innate language acquisition device (LAD) and universal grammar (Drobňák, 2025). Applied to Turkish, this theory underscores the role of immersion and rich linguistic environments in enabling learners to build competence beyond explicit instruction (Eigsti, 2021). In public schools and Turkish-speaking communities, where input is abundant, learners' cognitive readiness becomes a key determinant of their progress (Albayrak, 2023; Amira, 2024).

Sociocultural theory, rooted in Vygotsky's work, positions language development as a socially mediated process shaped by interaction and cultural tools (Tzuriel, 2021; Vygotsky & Cole, 1978). Core concepts such as the zone of proximal development and scaffolding emphasize the importance of teacher guidance and peer collaboration (Mahn, 2012). In Türkiye's multilingual classrooms, where cultural diversity is pronounced, this perspective supports pedagogical approaches that are responsive to learners' sociocultural backgrounds (Yazıcı & Gkötentürk, 2020).

The communicative approach shifted attention from structure to meaning, emphasizing functional use of language in authentic contexts (Hymes, 1972). Known internationally as *communicative language teaching* (CLT), this approach focuses on fluency, functional language use, and meaningful communication in real-life situations (Adem & Berkessa, 2022). Particularly in Turkish Teaching Centers (TÖMER) or private institutions, communicative practices support learners in developing practical language skills needed for daily life, bureaucratic tasks, and academic participation (Şenel & Şengül, 2021).

The action-oriented approach, central to the Common European Framework of Reference for Languages (CEFR), regards learners as social agents who accomplish tasks through language (Council of Europe, 2020). Its performance-based descriptors link learning outcomes to what students can do in real-life situations (Piccardo & North, 2019). In Türkiye, where formal education settings increasingly align with CEFR guidelines, this approach has gained traction in curriculum development for Turkish as a second language (Kılınç, 2021; Turkish Maarif Foundation, 2020). In Türkiye, this approach has guided curriculum reforms and inspired task-based, project-based, and competency-driven models in Turkish language programs (Ak Başoğul, 2022; Eraslan & Yücel, 2024).

Together, these paradigms highlight the cognitive, social, and contextual dimensions of second language learning. Their cumulative insights laid the groundwork for ecological models, which integrate these perspectives to capture the layered realities of teaching and learning Turkish.

Ecological Lens in Second Language Learning

Zumbo's ecological framework draws on Bronfenbrenner's ecological systems theory in its recognition that learning is situated within nested, interdependent contexts (Bronfenbrenner, 1979; Zumbo et al., 2015). Both frameworks emphasize the interaction of individual and environmental factors, challenging reductionist views of development (Härkönen, 2001; Zumbo, 2017). Yet, while Bronfenbrenner's theory emerged from developmental psychology, Zumbo's model originated in educational measurement to address validity, fairness, and equity in diverse populations (Göktentürk et al., 2023). This foundation makes it particularly suited to examining how psychometric concerns intersect with sociocultural and institutional realities in second language research.

Initially developed for test validity, Zumbo's ecological framework has since been adapted for broader educational contexts (Sağlam et al., 2023; Saglam & Goktenturk, 2024). Its layered structure captures how immediate and extended environments influence learning processes and outcomes (Göktentürk, 2021). Rather than isolating the learner, the framework maps how structural and cultural features of schools, families, and communities create supports or barriers to learning (Launeanu & Hubley, 2017; Sağlam et al., 2023). In second language education, this perspective has been reflected in initiatives such as bilingual family literacy programs, heritage language projects, and teacher professional development targeting diverse classrooms (Gasca Jiménez & Adrada-Rafael, 2021; Mansouri et al., 2021). In this study, Zumbo's model is applied to Turkish as a second language to examine four interrelated ecological layers.

Layer 1: Personal characteristics and individual differences. This innermost layer encompasses personality-related variables such as motivation, resilience, prior knowledge, and self-efficacy (Ashton, 2023; Fox, 2003). These attributes, often shaped by age, migration history, and educational background (Heinonen & Nissen-Lie, 2020; Holopainen & Björkman, 2005), strongly influence how learners engage with Turkish as a second language. In particular, such individual differences determine how students approach language tasks, respond to feedback, and persist through linguistic challenges (Barın, 2004; İnal & Çakır, 2021). For example, individualized goal-setting and self-access learning opportunities in TÖMER programs help sustain motivation for learners with varying self-efficacy (Hamzadayı & Büyükikiz, 2015).

Layer 2: Classroom and school context. Institutional dynamics—including teacher quality, pedagogy, school climate, and peer relations—form the second layer (Zumbo, 2023). Turkish learners encounter diverse school structures, from public schools to TÖMER centers, each with varying resources and support (Tanman & Özgenel, 2021). These factors shape not only the availability of learning resources but also the quality of pedagogical engagement (Hirschy & Wilson, 2002; Shogren et al., 2013). Classroom practices such as cooperative learning in mixed-nationality groups and culturally responsive curricula illustrate how this layer shapes second language acquisition (Tanrıkulu, 2021; Yazıcı & Göktentürk, 2020).

Layer 3: Family and out-of-school. This layer addresses the influence of the home environment and other non-school settings (Subotnik et al., 2019). Elements such as the presence of Turkish-speaking family members, family attitudes, literacy practices, and socioeconomic conditions affect learners' access to Turkish beyond school (Boylu & Işık, 2019; Toprak Ay & Göktentürk, 2023). Ethnolinguistic enclaves can limit exposure, while community resources such as libraries or NGO programs offer additional practice opportunities (Toluoğlu & Çiftçi, 2022). These out-of-school influences are particularly significant for migrant and refugee students.

Layer 4: Educational system, national and state-level characteristics. The outermost layer encompasses integration policies, societal discourse on migration, and the role of Turkish as a gatekeeping language (Stein et al., 2007; Turkish Maarif Foundation, 2020). In Türkiye, projects such as PİKTES provide large-scale ecological support by offering language education, psychosocial assistance, and teacher training for refugee children (Güngör Yereyıkılmaz & Güner Özer, 2025). National policy and societal attitudes therefore strongly shape both opportunities and constraints in learning Turkish.

By integrating these four layers, Zumbo's ecological framework provides a multidimensional account of second language learning. It situates acquisition within the interaction of personal, institutional, familial, and societal factors, making it particularly relevant in Türkiye's migration-affected context. Extending Zumbo's original concern with *in vivo* measurement Göktentürk et al., 2023; Zumbo, 2017), this study applies the framework to authentic learner experiences, aligning with calls in applied linguistics to bridge ecological theory with policy and practice (Lier, 2010). It thus establishes the conceptual foundation for analyzing how ecological conditions shape Turkish language learning across educational levels.

Method

This study employed a qualitative paradigm with a phenomenological design to explore the ecological dimensions of learning Turkish as a second language. Phenomenology was selected to capture how learners experience and interpret language learning across educational, familial, and societal contexts (Creswell, 2009; Pilarska, 2021). The phenomenon under investigation was the process of acquiring Turkish in formal education settings—public schools, private institutions, and Turkish Teaching Centers (TÖMER).

The research was conducted during the 2023–2024 academic year with participants actively enrolled in Turkish language education, allowing situated experiences to be examined within a defined timeframe. Anchored in a constructivist paradigm, the study recognizes that learners' perceptions are shaped by social and instructional interactions (Pilarska, 2021; Ponterotto, 2005). This orientation aligns with the study's aim of revealing the layered realities of learners from diverse backgrounds.

The analysis followed four steps consistent with phenomenological inquiry: (1) categorizing learners by educational level to identify context-specific patterns; (2) conducting semi-structured interviews to elicit personal narratives; (3) analyzing experiences through Zumbo's ecological framework; and (4) synthesizing emergent findings into themes and categories that reflect core meanings (Creswell, 2016; Miles et al., 2014). Reporting adhered to the Standards for Reporting Qualitative Research (SRQR) (O'Brien et al., 2014), ensuring methodological transparency and rigor.

Participants

A combination of stratified and snowball sampling was used to capture ecological variation in learners' experiences across educational levels (Creswell, 2009; Yıldırım & Şimşek, 2016). Participants were grouped into four categories—primary, middle, and high school students, and adult learners—reflecting the structure of the Turkish education system. Kindergarten learners were excluded since Turkish is not yet systematically taught as a second language in early childhood settings.

Within each group, sampling was further stratified by grade level or program type to ensure intra-group diversity. A total of 48 participants were recruited from public schools, private schools, and Turkish Teaching Centers (TÖMER). Initial participants were identified through stratification, with further recruitment via snowball sampling until data saturation was achieved (Kerr et al., 2010). nclusion criteria required active enrollment in a formal Turkish language program during the 2023–2024 academic year and willingness to participate in semi-structured interviews. Alongside age and educational level, participants' countries of origin were recorded to contextualize their sociocultural backgrounds and inform interpretation of ecological factors influencing their learning

Table 1. Participants

Group	Educational Level or Learning Purpose	Participant Number	Country of Origin	Age Range
Primary school	Grade 1	7	Germany, USA, France, Syria, Jordan	6-7
	Grade 2	2	Zambia, Sweden	8-9
	Grade 3	8	Pakistan, United States, Syria, United Kingdom, Zambia, China, Yemen, Australia	9-10
	Grade 4	3	United States, Jordan, Australia	10-11
Middle school	Grade 5	5	Australia, Sweden, Syria, United States	11
	Grade 6	4	South Korea, Uzbekistan, Egypt, Lebanon	11-12
	Grade 7	2	Australia, Syria	12-13
	Grade 8	1	United States	13
High school	Grade 9	3	Egypt, Syria, Dubai	15
	Grade 10	2	Dubai, China	16
	Grade 11	2	Syria	17
	Grade 12	2	Syria, Iraq	18
Adult Learners	University preparation	3	Tunisia, Syria, Morocco	25-36
	Graduate education preparation	2	Egypt, Syria	32-41
	Daily-life	2	Syria	34-65

Data collection process

Data collection was guided by the adapted version of Zumbo's ecological model (Göktentürk, 2021; Göktentürk et al., 2023). The original framework includes item-level response processes (Zumbo et al., 2015), but this component was excluded given the qualitative focus of the study. Accordingly, the model was operationalized through four ecological layers—personal characteristics, classroom and school context, family and out-of-school ecology, and societal and national factors—which also structured the interview protocol.

A semi-structured interview protocol was developed through iterative expert consultation (Srivastava & Hopwood, 2009). in Turkish language education reviewed the draft items and recommended adding probing questions to elicit greater depth. Based on this feedback, each of the four main questions was supplemented with follow-up prompts. The finalized protocol is presented in the Supplementary Materials.

Interviews were conducted one-on-one and in person with volunteers from each learner group—primary, middle, and high school students, as well as adult learners—initially in Istanbul. Following these contacts, snowball sampling was used to identify additional participants until data saturation was achieved (Creswell, 2009; Yıldırım & Şimşek, 2016). The data collection phase lasted two weeks.

Participants received the interview form in advance and were briefed on study procedures. Informed consent was obtained both prior to and during interviews, and confidentiality was guaranteed. Each interview lasted 5–10 minutes and was audio-recorded with permission. Recordings were transcribed verbatim, with original audio consulted to preserve nuances. To ensure consistency, the research team held regular feedback sessions during transcription and analysis. All data were stored securely in a password-protected private cloud accessible only to the researcher.

Data analysis

Interview transcripts were imported into ATLAS.ti 8 for qualitative analysis (Friese, 2019). While transcripts provided the main basis for coding, original audio recordings were continually consulted to capture nuances of intonation, emphasis, and conversational flow that written text might omit (Rutakumwa et al., 2020). Thematic analysis followed Braun and Clarke's (2006) six-phase framework, beginning with systematic coding and progressing to the development of themes. Codes were grouped into broader categories, which were refined through literature-informed comparisons to ensure conceptual consistency. ATLAS.ti's direct audio-based coding feature enabled the integration of paralinguistic cues into the thematic

structure (Woods et al., 2016), enhancing interpretive accuracy and reliability.

The initial thematic structure underwent two rounds of expert validation (Srivastava & Hopwood, 2009). Based on feedback, redundant codes were removed, overlapping categories consolidated, and final adjustments made to ensure clarity and cohesion (Miles et al., 2014). The resulting thematic model was mapped onto Zumbo's ecological framework: top-level categories were derived deductively from its four layers, while subcategories emerged inductively from participant narratives.

Supplementary Table 2 provides illustrative quotations from each learner group with their assigned codes, categories, and ecological layers

Findings

In line with the research objectives, findings are presented separately for primary, middle, high school students, and adult learners. This classification reflects the assumption that each group is shaped by a distinct ecological background, influenced by curricular exposure, institutional structures, and developmental stage.

Thematic organization follows the four-layer ecological framework, with results presented in a bottom-up sequence beginning with primary school learners. Within each group, ecological variables shaping Turkish language learning are identified and discussed in detail.

Ecological Background of Primary School Students

Analysis of primary school participants yielded four overarching themes aligned with the ecological framework, comprising 28 categories: 2 under personal characteristics, 8 under school context, 10 under family and out-of-school environment, and 8 under national and cultural factors. At this level, students mentioned relatively few individual traits, but provided extensive reflections on environmental influences. Teacher-related factors, with six distinct categories underscoring the centrality of teachers in shaping young learners' perceptions of language learning. In the familial domain, heritage language use, bilingualism, and cultural transmission through sibling and parental interactions were prominent.

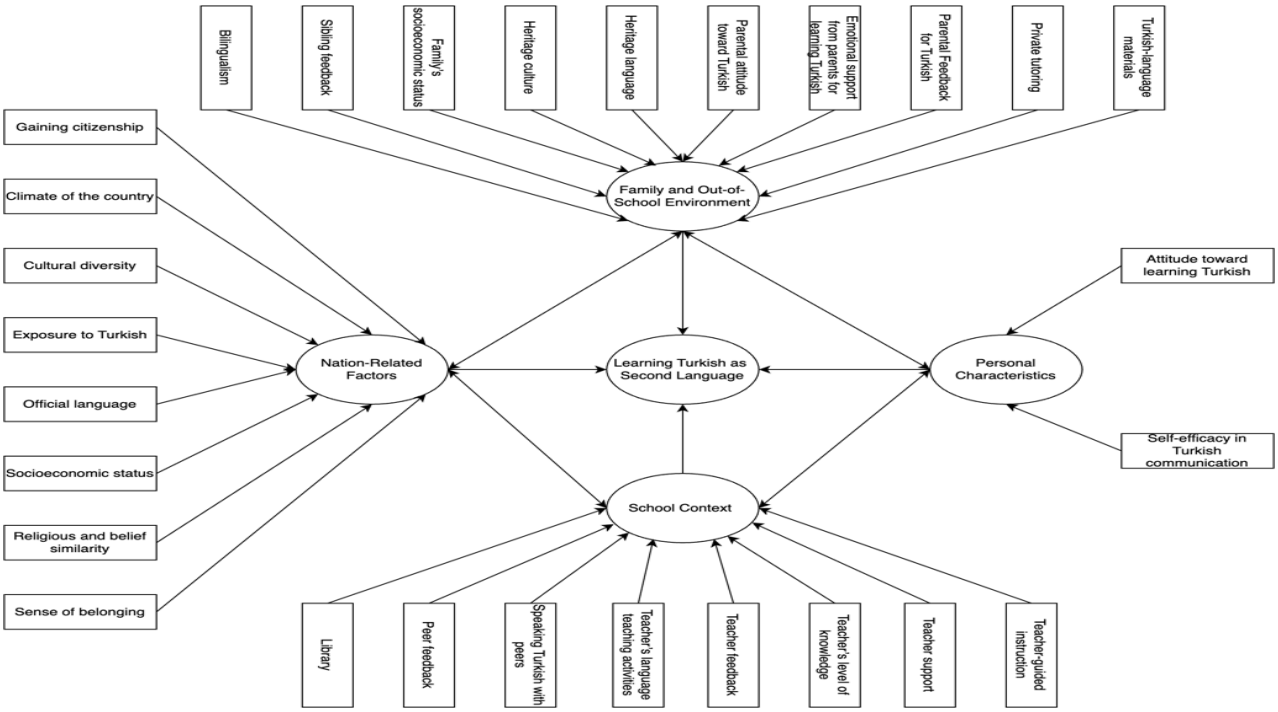


Figure 1. The ecological background at the primary school level

Socioeconomic factors—such as access to private tutoring and Turkish-language resources at home—also emerged as significant.

At the national level, students highlighted cultural familiarity with Turkish traditions and described Türkiye, especially Istanbul, as a supportive and livable environment for learning compared to their countries of origin. These findings suggest that while individual characteristics play a limited role for primary learners, ecological supports at school, home, and national levels substantially frame their learning experiences. A visual representation of these results is provided in Figure 1.

Following the visual model in Figure 1, illustrative quotations are presented to substantiate the categories across the four ecological layers. Drawn from semi-structured interviews, these excerpts align with the identified themes and capture how primary school learners describe the conditions shaping their Turkish language learning. A summary of representative quotations is provided in Table 2.

Table 2. Primary school related findings

Themes	Categories	References
Personal Characteristics	Attitude toward learning Turkish (f=4)	"Turkish is a beautiful language."
	Self-efficacy in Turkish communication (f=15)	"When I need to talk to people, I can speak."
School context	Peer feedback (f=3)	"My friends tell me when I make mistakes. I learn my errors."
	Speaking Turkish with peers (f=8)	"We have friends here. We speak Turkish."
	Library (f=2)	"Of course, the library helps. There are Turkish books. We read."
	Teacher's knowledge level (f=16)	"Our teachers at school know Turkish and teach us better."
	Teacher support (f=12)	"Our teachers support us a lot in class. They always want us to learn."
	Language teaching activities by the teacher (f=7)	"We play word games. It's fun."
	Teacher feedback (f=14)	"My teacher tells me when I make mistakes."
	Teacher-directed instruction (f=5)	"Our teacher tells us what to do. We learn."
Family and Out-of-School	Family's socioeconomic status (f=8)	"My family can buy what is needed. Books, school supplies…"
	Emotional support from parents (f=18)	"When I speak Turkish, my family is happy and supports me."
	Parental attitude toward Turkish (f=2)	"My mom and dad really wanted me to learn Turkish."
	Turkish materials at home (f=1)	"There are Turkish books at home. I can read."
	Bilingualism (f=1)	"Sometimes I speak another language. I don't use Turkish."
	Sibling feedback (f=4)	"My sister knows Turkish. She tells me when I make mistakes."
	Heritage language (f=6)	"My mom and dad have another language. We speak it at home."
	Heritage culture (f=2)	"Holidays can be different in our country. I have to act accordingly."
	Private tutor (f=5)	"Yes, I take private lessons."
Nation-related factors	Religious and faith similarity (f=4)	"We have the same religion."
	Cultural diversity (f=1)	"There are very different people in Türkiye. From many countries."
	Level of prosperity (f=3)	"There are more opportunities in Türkiye."
	Official language (f=25)	"Turkish is spoken in Türkiye. That's why we must learn it."
	Sense of social belonging (f=5)	"It's warmer here. I like being in Türkiye."
	Exposure to Turkish (f=9)	"There is Turkish everywhere in Türkiye. We hear it. That's how we learn."
	Climate of the country (f=1)	"The climate in Türkiye is better."
	Obtaining citizenship (f=3)	"We want to get

The responses in Table 2 reflect primary school students' perspectives across the four ecological layers guiding this study. Within *personal characteristics*, students emphasized their attitudes toward learning Turkish and their self-efficacy in using the language for communication. These reflections reveal how early beliefs about competence shape motivation and highlight key psychometric variables that influence language acquisition.

In the *school and classroom context*, peers, resources, and especially teachers were identified as central factors. Students valued feedback from classmates and opportunities to practice Turkish with peers. Access to Turkish materials in school libraries was noted as helpful, but teachers stood

out as the dominant influence. Their subject expertise, ability to design engaging activities, and continuous support were frequently cited, underscoring young learners' reliance on teacher guidance.

The *family and out-of-school environment* also played a significant role.

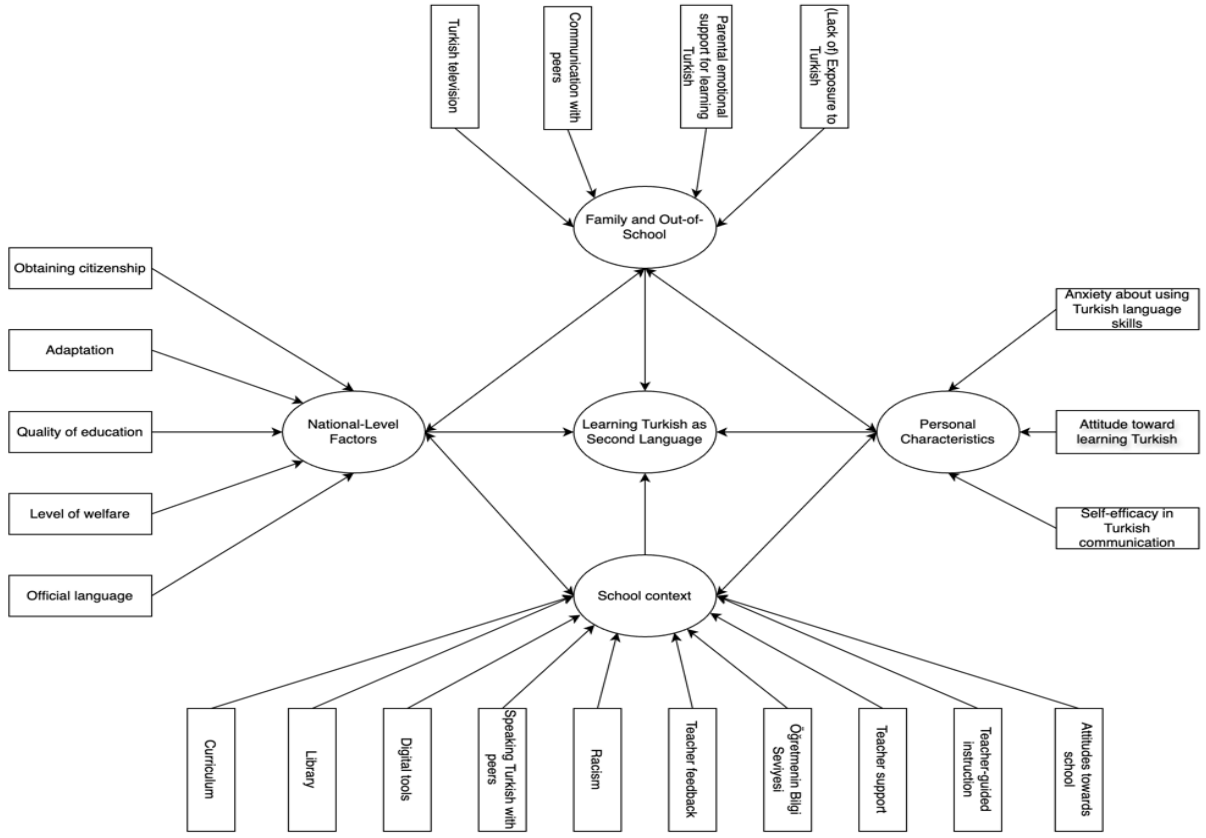


Figure 2. The ecological background at the primary school level

Families' economic capacity to provide materials or private tutoring supported learning, while parental encouragement reinforced motivation. Conversely, heritage language use, bilingual home environments, and culturally specific traditions often limited Turkish exposure, constraining opportunities for practice outside school.

At the *national and cultural level*, participants pointed to religious and cultural similarities with Türkiye as easing adaptation. Istanbul, in particular, was described as a supportive and resource-rich environment compared to their home countries. The official status of Turkish was cited as a compelling rationale for learning it, while aspirations for Turkish citizenship—often shared with family members—emerged as an important long-term motivator.

Ecological Background of Secondary School Students

Following the ecological framework, categories for secondary school learners were organized into four themes: three under personal characteristics, ten under the school context, four within family and out-of-school environments, and five related to national-level variables. Compared to primary students, responses at this stage included fewer personal traits but a broader range of external ecological influences. The school context was the most densely represented, with four teacher-related categories alongside themes concerning material resources and peer interactions.

To illustrate the ecological patterns observed in the middle school data, representative quotations were matched with each category to highlight variables influencing Turkish language learning. These excerpts show consistent alignment with the four ecological layers of the adapted model. A

summary of findings, supported by direct student statements, is presented in Table 3.

Secondary school students' responses were distributed across four ecological themes. Within *personal characteristics*, three categories emerged: attitudes toward learning Turkish, self-efficacy, and language-related anxiety. While most students expressed positive views of Turkish and confidence in understanding it, some reported feeling shy or anxious when using their skills in public, reflecting early adolescent sensitivity to peer and social judgment.

Table 3. Secondary school related findings

Themes	Categories	Supporting Quote
Personal Characteristics	Anxiety about using Turkish language skills (f=1)	"Sometimes I feel shy when I use what I've learned or speak outside."
	Self-efficacy in Turkish communication (f=1)	"When Turkish is spoken, I understand."
	Attitude toward learning Turkish (f=7)	"I think Turkish is a good language."
School context	Attitudes towards school (f=3)	We have a good school.
	Speaking Turkish with peers (f=4)	"I go to class every day here and talk with my friends."
	Digital tools (f=1)	"Sometimes I use apps on the iPad that help me improve my Turkish."
	Racism (f=1)	"They hate us."
	Library (f=2)	"I can read books in the library."
	Curriculum (f=2)	"Sometimes we learn from the book, sometimes from class content. There's a system."
	Teacher's subject-matter expertise (f=5)	"I don't know some things. My teacher teaches what they know."
	Teacher support (f=7)	"My teacher helps a lot."
	Teacher feedback (f=4)	"Sometimes the teachers tell me my mistakes."
	Teacher-guided instruction (f=2)	"While teaching, the teacher writes on the board and tells us what to do."
Family and Out-of-School	Communication with peers (f=21)	"I have friends. I talk to them."
	Parental emotional support for learning Turkish (f=13)	"My family feels proud when I speak Turkish with other people."
	(Lack of) Exposure to Turkish (f=8)	"I speak Turkish with my sister. My family doesn't know Turkish."
	Turkish television (f=1)	"My mom watches Turkish TV."
Nation-related factors	Adaptation (f=13)	"I live here, and I need to speak Turkish in order to live."
	Quality of education (f=1)	"I came for a good education."
	Level of welfare (f=3)	"There are better job opportunities in Türkiye."
	Official language (f=21)	"They speak Turkish in Türkiye. That's why I need to learn it."
	Obtaining citizenship (f=2)	"We want to get citizenship."

The *school context* yielded the largest number of categories. Teachers were especially central, with students highlighting subject-matter knowledge, supportive behavior, guidance, and feedback as crucial to their progress. Curricular structure and access to school libraries also contributed positively, providing a sense of order and additional learning resources. Peer interactions within class reinforced language use, while digital tools such as tablet-based apps offered supplementary practice. However, experiences of racism were also noted, pointing to school climate as a barrier for some learners.

In the *family and out-of-school environment*, peer communication outside school was the most frequently mentioned factor, underscoring the importance of informal interaction. Parental emotional support, especially pride in children's ability to use Turkish publicly, reinforced motivation. Limited exposure at home, particularly when parents lacked Turkish proficiency, was cited as a challenge, although siblings sometimes provided practice opportunities. Turkish television was mentioned as an additional, though less frequent, source of language exposure.

At the *national level*, students emphasized the official status of Turkish as the primary reason for learning it, with adaptation needs in daily life strongly reinforcing this perspective. Broader motivators included the perceived quality of education, better economic opportunities in Türkiye, and long-term aspirations for citizenship. Together, these responses show that secondary school learners connect their language acquisition not only to immediate school experiences but also to wider goals of integration and future security.

Ecological Background of High School Learners

In line with the ecological framework, findings for high school students were grouped into four themes encompassing 24 categories: two under personal characteristics, nine in the school context, seven within family and out-of-school environments, and six at the national and cultural level. provided a coherent structure for organizing the primary themes, while also accommodating unique subthemes that emerged from the narratives. Notably, mentions of perceived racism at the national level and references to Turkish-speaking communities abroad extended the framework, adding further depth to the ecological interpretation of students' language learning experiences.

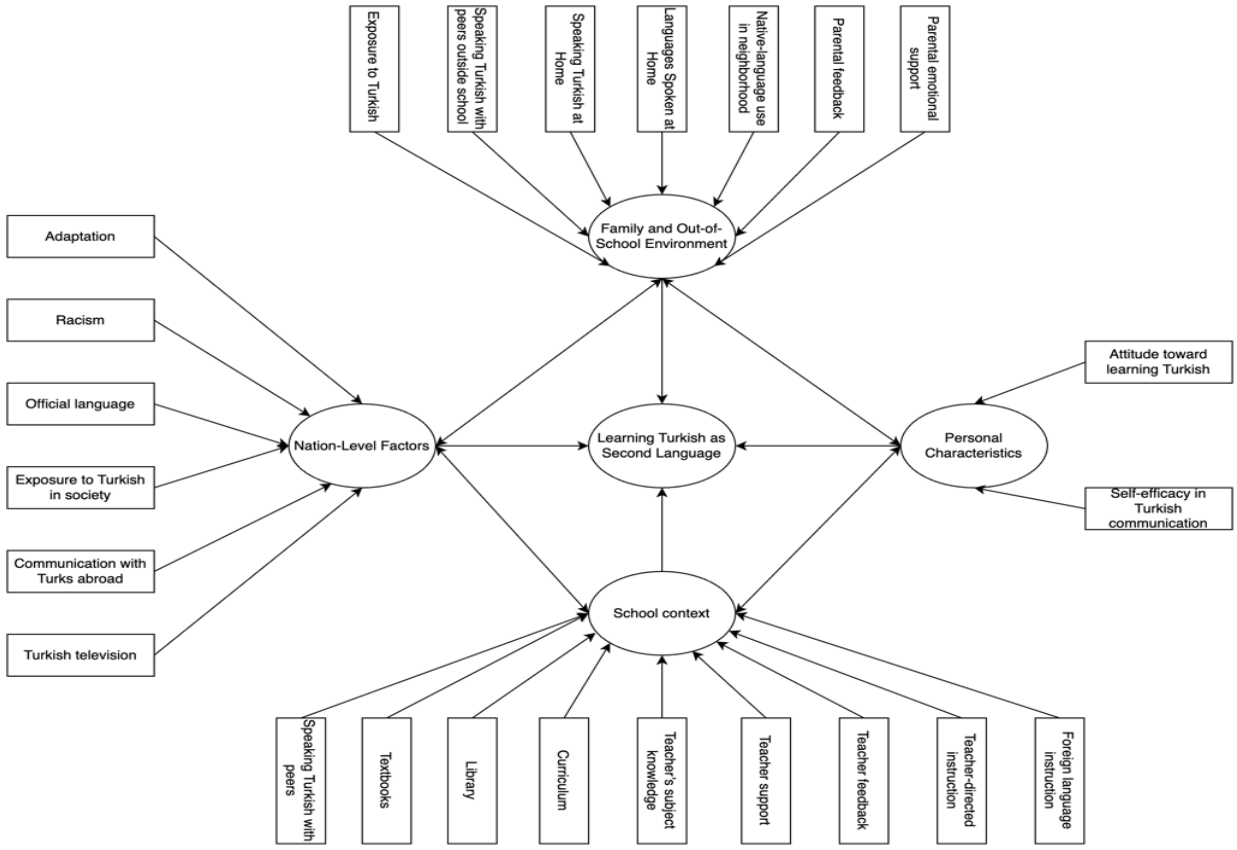


Figure 3. The ecological background of the high school learners

Compared to earlier stages, a shift in emphasis was evident—fewer categories were associated with the school setting, while national-level influences were more prominent. Nonetheless, the school context remained the most category-rich theme, underscoring its continued importance in shaping high school students' second language learning experiences.

The model derived from high school student data is illustrated through representative quotations in Table 4, which substantiate the identified categories across the ecological layers. These layers

Table 4. High school related findings

Themes	Categories	Supporting Quote
Personal Characteristics	Self-efficacy in Turkish communication (f=6)	"I am learning Turkish so that I can communicate."
	Attitude toward learning Turkish (f=2)	"Turkish is a wonderful language for me."
School context	Speaking Turkish with peers (f=2)	"Here, it is necessary to speak Turkish with friends."
	Textbooks (f=1)	"Yes, they give us textbooks at school. We learn from them."
	Library (f=2)	"They lend us books from the school library."

	Curriculum (f=6)	"There are designated Turkish classes at school. We learn during those lessons."
	Teacher's subject knowledge (f=3)	"Our teachers know Turkish. They answer our questions. We learn from them."
	Teacher support (f=1)	"The teachers are very supportive at school."
	Teacher feedback (f=2)	"When I write or speak, the teacher corrects my mistakes."
	Teacher-directed instruction (f=2)	"During Turkish class, teachers tell us what to do. They lead the class and we learn."
	Foreign language instruction (f=2)	"There are foreign language classes at school. We learn alongside Turkish."
Family and Out-of-School	Parental emotional support (f=3)	"My parents really want me to learn Turkish. They're happy when I speak it."
	Parental feedback (f=1)	"When I make mistakes (in Turkish), my mom and dad correct me."
	Native language use in neighbourhood (f=1)	"I don't use much Turkish outside of school. In our neighborhood, we speak our own language."
	Speaking Turkish at Home (f=2)	"Sometimes we speak Turkish at home."
	Speaking Turkish with peers outside school (f=4)	"I have friends outside of school. We chat in Turkish."
	Exposure to Turkish (f=7)	"Even outside of school, people always speak Turkish. We constantly hear it."
Nation-related factors	Adaptation (f=14)	"We live in Türkiye. To live here, we must know Turkish."
	Racism (f=1)	"If someone silences me or attacks me for speaking my language, I must defend myself."
	Official language (f=10)	"Turkish is the language of Türkiye. That's why we must learn it."
	Exposure to Turkish in society (f=11)	"People speak Turkish everywhere in Türkiye."
	Communication with Turks abroad (f=1)	"There are many Turks living outside Türkiye—in Germany, the U.S., etc. You can speak with them."
	Turkish television (f=2)	"I learned from Turkish TV shows that are broadcast."

The findings from high school students revealed an emerging sense of agency and heightened social awareness in their experiences of learning Turkish as a second language. Many expressed a clear sense of purpose, particularly in relation to communicative self-efficacy, emphasizing that Turkish was indispensable for both academic participation and daily interaction. Their generally positive attitudes—captured in descriptions of Turkish as a "wonderful language"—signal a deeper emotional investment and stronger internalization of learning goals compared to earlier developmental stages.

Although slightly fewer *school-related categories* were identified than at the middle school level, the institutional context remained the most prominent theme. Students highlighted curricular structures, textbooks, and formal Turkish classes, while continuing to portray teachers as central figures in the learning process. Teachers' subject knowledge, support, feedback, and directive guidance were frequently mentioned, reflecting the persistence of a teacher-led model in classroom dynamics. The concurrent presence of foreign language classes also pointed to multilingual school environments where Turkish functioned as one of several instructional languages. Peer interaction in Turkish was still seen as essential for everyday schooling.

Family and neighborhood environments exerted varied but influential effects. Emotional encouragement and correction from parents were valued, yet exposure to Turkish differed according to household language practices and neighborhood demographics. Some students reported daily opportunities to use Turkish at home and in their surroundings, while others lived in ethnolinguistic enclaves where heritage languages dominated. Informal peer networks outside of school often compensated for limited exposure, offering valuable spaces to sustain oral proficiency.

At the *societal level*, national influences provided a broader motivational frame. Students consistently cited the official status of Turkish and its ubiquity in public life as reasons for learning it, while Turkish-language media—especially television—was identified as an accessible input source. Distinctively, high school learners also referenced global Turkish-speaking communities and experiences of discrimination, reflecting a more critical engagement with language, identity, and social inclusion. These accounts suggest that high school students encounter second language learning not

only as an academic necessity but as a sociopolitical process embedded within layered ecological dynamics.

Ecological Background of Adult Learners

The four-layer ecological model was also effective in capturing the experiences of adult learners. Analysis identified three categories under personal characteristics, six related to the school context, four concerning family and out-of-school environments, and six linked to national and cultural factors. Compared to other groups, adults contributed the richest set of responses in the personal domain, reflecting a heightened sense of self-awareness and individual variability in their learning trajectories. In contrast, the distribution of categories across the remaining layers was relatively balanced, suggesting that adult second language acquisition is shaped by a more even interplay of school, family, and societal influences.

The supporting excerpts that illustrate the ecological background of adult learners are presented in Table 5. As a distinct group, adults articulated categories shaped by themes such as geographic proximity to their homeland, professional aspirations, and cultural alignment, reflecting motivations and contexts that differ from those of younger learners. While the overarching ecological structure remained consistent across groups, the family and out-of-school environment layer required minor reorganization to more accurately capture the lived realities of adult participants.

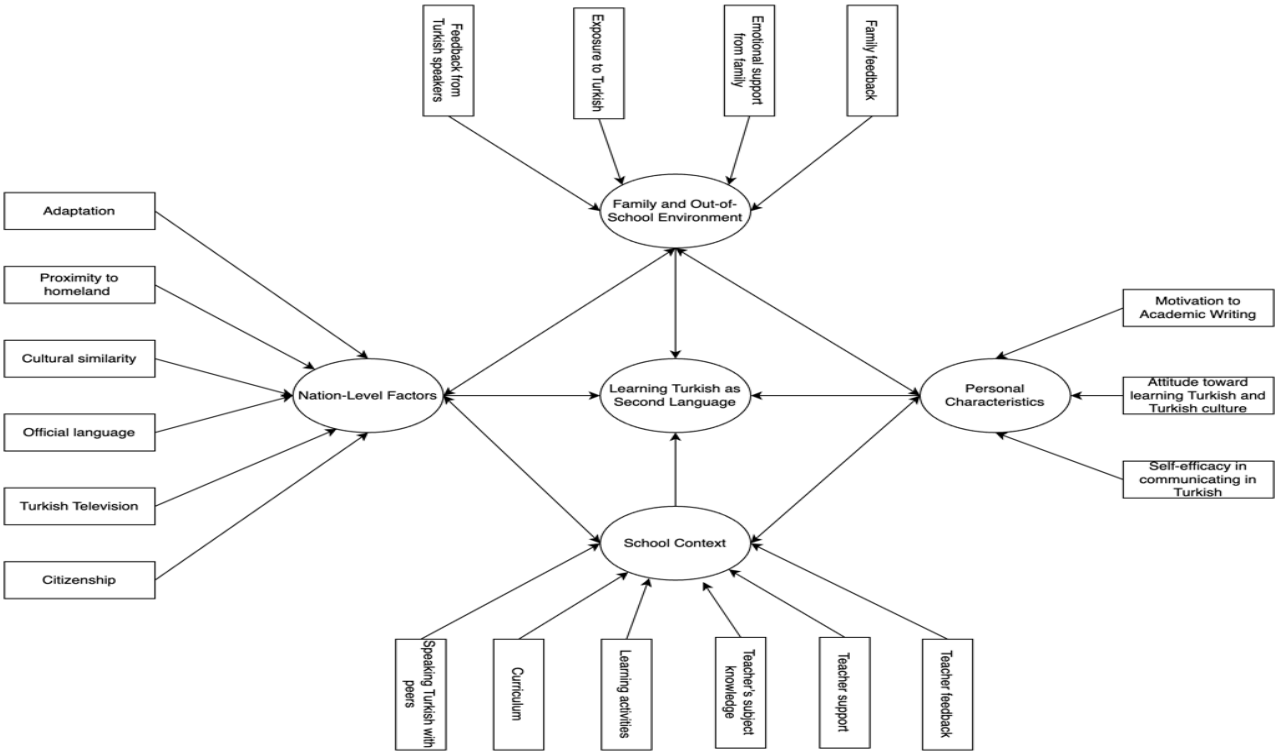


Figure 4. The ecological background of the adult learners

Table 5. Adults related findings

Themes	Categories	Supporting Quote
Personal Characteristics	Motivation for academic writing (f=1)	"I am learning Turkish so that I can communicate."
	Attitude toward learning Turkish and Turkish culture (f=4)	"Turkish is a wonderful language for me."
	Self-efficacy in communicating in Turkish (f=3)	"I need to learn Turkish to read and speak in Turkish."
School context	Speaking Turkish with peers (f=2)	"I made more friends. I spoke Turkish with them."
	Curriculum (f=6)	"There is structured learning in any course. I believe it improved my language skills."
	Library (f=2)	"They lend us books from the school library."

	Curriculum (f=6)	"There are designated Turkish classes at school. We learn during those lessons."
	Learning activities (f=1)	"We did activities in the course to learn. These helped me improve."
	Teacher's subject knowledge (f=2)	"The teachers knew Turkish and were teaching while we were learning."
	Teacher support (f=1)	"The teachers were very supportive."
	Teacher feedback (f=1)	"When I made mistakes, my teachers corrected me. I learned a lot from them."
Family and Out-of-School	Family feedback (f=3)	"When I didn't know something, my family pointed out my mistakes and helped."
	Emotional support from family (f=6)	"My family gave me great support. My spouse came with me every day so I could attend the course."
	Exposure to Turkish (f=20)	"People frequently speak Turkish where I live. I hear it all around me."
	Feedback from Turkish speakers (f=1)	"Turkish people we chat with daily also point out my mistakes when I make them."
Nation-related factors	Adaptation (f=17)	"I don't think it's a choice. Anyone considering living in Türkiye should learn Turkish." "While I was in Egypt, I was learning the language (Turkish) of another country. Now that I'm in Türkiye, I learn the language (Turkish) to live here."
	Proximity to homeland (f=2)	"Türkiye is close to my home country. So I can visit my relatives easily."
	Cultural similarity (f=2)	"The cultural structure in Türkiye is very similar to ours. Its Islamic structure resembles my country."
	Official language (f=11)	"People speak Turkish in Türkiye. It is necessary to learn it."
	Turkish television (f=1)	"At home, I always turned on and watched Turkish TV. These served as examples for me."
	Citizenship (f=1)	"Türkiye has a similar culture and resembles Europe. Also, it is easier to get citizenship here."

The excerpts in Table 5 reveal how adult learners' trajectories are shaped by interconnected factors across all four ecological layers. At the *personal level*, participants displayed strong metacognitive awareness and goal-directed behavior, particularly in their motivation to master academic writing and to engage with Turkish language and culture. Their confidence in communication emphasized a practical orientation toward functional language use in both professional and everyday contexts.

Within the *school environment*, adults valued structured curricula, peer interactions, and teacher expertise. Although more autonomous than younger learners, they still relied on teacher feedback and guided instruction, especially when aligned with academic or professional objectives. Distinct from earlier groups, they articulated explicit expectations for instructional quality, positioning schools as platforms for targeted linguistic advancement rather than general socialization.

In the *family and out-of-school ecological layer*, support from household members was central to sustaining formal language learning. Notably, this group reported the highest level of interaction with Turkish in neighborhoods and social interactions. This suggests a porous boundary between institutional learning and informal contexts, with adults consistently extending classroom learning into daily life.

At the *national level*, participants highlighted Turkish as essential for adaptation, civic integration, and long-term settlement goals, including citizenship. Cultural proximity and the practical advantages of living in Türkiye were frequently cited, while Turkish media, especially television, functioned as a supplementary source of both linguistic input and cultural orientation. Together, these findings demonstrate how adult learners actively integrate personal goals, institutional resources, familial support, and societal opportunities into an ecologically coherent learning process.

Discussion

This study explored the ecological background of learning Turkish as a second language across four educational stages—primary, middle, high school, and adult learners—through Zumbo's adapted ecological framework. By structuring findings across the four ecological layers—personal charac-

teristics, school and classroom environment, family and out-of-school setting, and national-cultural factors—the analysis revealed both shared and stage-specific patterns shaping learners' experiences. This layered interpretation highlights how contextual variables interact across developmental periods, offering a nuanced account of second language acquisition within migration-affected and multilingual contexts. In the following sections, each learner group is discussed in turn, with emergent findings connected to relevant theoretical and empirical insights.

Discussion of Primary School Findings

The findings at the primary school level highlight motivation—particularly self-efficacy and positive attitudes toward learning Turkish—as meaningful variables within the innermost ecological layer. These results reinforce the argument that affective and belief-oriented factors are foundational at early stages of second language acquisition and should be central to instructional design (Kim & Kim, 2025). Pedagogical practices that explicitly nurture these dispositions may foster sustained engagement and long-term motivation.

Within the school layer, teachers emerged as the most influential ecological factor. Students often interpreted their learning progress through teacher guidance, suggesting that educators act not only as facilitators but also as primary models of language use. This finding resonates with frameworks emphasizing gradual release of responsibility (Fisher & Frey, 2021; Turkish Maarif Foundation, 2020). eacher expertise and the use of structured activities—such as repetition, error correction, and language games—appeared to directly shape early acquisition processes (Zhang & Zou, 2024). The prominence of this theme indicates that classroom interactions remain pivotal in cultivating early linguistic competence.

The family and out-of-school layer further underscored the importance of socioeconomic resources, availability of Turkish-language materials, and parental encouragement. These findings confirm prior research on how home literacy environments influence motivation and academic success (Dong & Chow, 2022; Liu & Chung, 2024). Although younger learners exercise limited agency, their home contexts substantially determine opportunities for practice and reinforcement.

At the national level, students emphasized the official status of Turkish and expressed perceptions of cultural proximity. They associated the language with belonging and societal integration, reflecting an emergent awareness of its symbolic and practical role in adaptation. This observation aligns with studies showing that cultural alignment enhances motivation and smooths the adjustment process (Amit & Bar-Lev, 2015; De Jong et al., 2023). Collectively, the findings illustrate how all four ecological layers converge to support early Turkish language development, underscoring the interdependence of individual, classroom, familial, and societal influences during the initial years of formal education.

Discussion of Secondary School Findings

The findings from secondary school students reveal an evolving ecological profile in Turkish language learning. Within the personal characteristics layer, both enabling and constraining variables emerged. While expressions of self-efficacy (Sun et al., 2021) and positive attitudes toward learning Turkish (Kardoğan, 2025) were consistent with the primary school group, the appearance of language-use anxiety marked a developmental shift. This affective dimension suggests that increasing cognitive and social awareness during adolescence heightens sensitivity to performance and peer perception (Oakley, 2004). Although many themes mirrored those observed at the primary level, this added nuance underscores the need to address emotional factors within curriculum design and classroom practices for adolescent learners.

In the school and classroom context, teacher-related variables remained central. Students reported benefiting from teachers' subject knowledge, supportive behaviors, and feedback (Brown & Lee, 2025). Additionally, references to peer interaction and digital tools illustrate that learning extended beyond teacher-centered practices into more dynamic, resource-based environments (Schwartz & Deeb, 2021; Zhao & Lai, 2023). The recognition of curricular structure in student responses reflects a growing awareness of planned instruction. However, the emergence of racism as

a category represents a critical challenge. Expressed through perceptions of being disliked or unwelcome due to linguistic background, this theme resonates with studies showing that even subtle hostility can diminish participation and motivation (Er & Durmuş, 2021). These findings highlight the importance of fostering emotionally safe learning spaces that affirm learners' linguistic identities.

The family and out-of-school environment continued to exert influence. Peer communication beyond school was frequently cited, underscoring the reinforcing role of informal interactions in consolidating formal input (Lin, 2023). Emotional support from parents and siblings was also noted, though exposure to Turkish remained uneven, particularly in monoethnic or heritage-language-dominant neighborhoods (Moralı, 2018; Toprak Ay & Göktentürk, 2023). These linguistic enclaves may limit opportunities for immersion and, when considered alongside reported experiences of racism, highlight significant ecological barriers to sustained language practice.

At the national and cultural level, distal but powerful motivators shaped learners' perspectives. Turkish was framed as essential for adaptation, with strong links to instrumental goals such as educational attainment, improved quality of life, and citizenship. This configuration of motivators illustrates how broader sociopolitical realities influence learners' internal goal structures (Darvin & Norton, 2023). Collectively, the findings suggest that the ecology of language learning at the secondary level is shaped not only by classroom and family dynamics but also by sociocultural forces that define both immediate constraints and long-term aspirations.

Discussion of High School Findings

The findings from high school students indicate a continuation of motivational dynamics observed at earlier stages, with self-efficacy and positive attitudes toward learning Turkish remaining central personal characteristics. Unlike the middle school group, anxiety around language use did not emerge as a prominent theme, suggesting either greater affective regulation or improved adaptation to Turkish-speaking contexts. These results reaffirm that motivation-related personal variables remain influential throughout compulsory education, underscoring the importance of systematically incorporating them into second language instructional planning (Pawlak et al., 2025).

The school context continued to represent the richest ecological layer, though with a notable shift in emphasis. Students highlighted curriculum-embedded practices, particularly the role of textbooks, as central to their progress (Risager, 2021). References to structured exposure, vocabulary development, and inductive grammar learning confirmed the utility of curricular materials. Teacher expertise, feedback, and classroom guidance were again cited as critical supports, reinforcing the teacher's role as a primary facilitator (Brown & Lee, 2025). Additionally, the emergence of foreign language instruction as a contextual category revealed that Turkish was being acquired in multilingual school environments. This exposure to multiple languages may support metalinguistic awareness and cross-linguistic transfer, enriching the overall learning process (Toprak Ay & Göktentürk, 2023).

Family and out-of-school factors echoed previously observed patterns while reflecting the unique circumstances of older learners. Emotional encouragement from parents and home-based feedback remained significant, but exposure to Turkish varied widely depending on household and neighborhood language practices. Students residing in ethnolinguistic enclaves reported reduced opportunities for Turkish immersion, suggesting that high school learners—like their younger peers—can be constrained by localized language islands within urban Türkiye (Cheng & Zhou, 2023; Toprak Ay & Göktentürk, 2023). These findings emphasize the continued importance of examining ecological contexts at a neighborhood level.

At the national layer, high school students associated Turkish language learning with adaptation, integration, and social participation. However, racism emerged differently than at the middle school level. Rather than primarily reporting emotional

perceptions of being disliked, participants described overt hostility, including verbal attacks and social confrontations linked to heritage language use. In this context, learning Turkish was framed as a protective strategy—necessary not only for integration but also for reducing vulnerability in public spaces. This finding aligns with research demonstrating that defensive motivations can drive language acquisition in contexts marked by discrimination (Masson et al., 2022). Turkish-language media, particularly television, was again cited as a supplemental input channel (Montero Perez, 2022). Additionally, some participants referenced contact with Turkish-speaking communities abroad, reflecting a broadened perception of Turkish as a global language (Boeschoten, 2022). Collectively, these findings demonstrate that high school students experience Turkish language learning as both a local necessity and a globally relevant skill within a multilayered sociocultural context.

Discussion of Adult Learner Findings

The findings for adult learners reveal a distinct ecological profile shaped by their professional goals, cultural orientation, and targeted learning objectives. Within the personal layer, participants expressed motivations extending beyond everyday communication, focusing on academic Turkish—particularly for employment or higher education (Karatay et al., 2019; Sağlam et al., 2022). This reflects a goal-driven approach shaped by institutional and career demands. Positive attitudes toward the Turkish language and culture, combined with strong communicative self-efficacy, suggest an intentional investment in both linguistic mastery and cultural integration. Many participants noted cultural proximity as an advantage, reinforcing adaptation to life in Türkiye (Flores et al., 2025; Yazıcı & Göktentürk, 2020).

In the school and instructional context, structured curricula, teacher expertise, and formal learning activities were consistently highlighted as central to progress. Institutions such as TÖMER and DİLMER appeared well-positioned to meet the advanced needs of adult learners (Şimşek & Bozkırlı, 2024). The teacher's role remained critical, underscoring the importance of specialized pedagogical training for adult second language instruction. The repeated emphasis on curricular coherence also demonstrates how standardized, purpose-driven materials effectively support this group's outcomes (Yıldız Yalçın & Özdemir, 2025).

Out-of-school factors further reinforced formal learning. Daily interactions, spousal encouragement, and corrective feedback from family members sustained engagement and facilitated authentic use of Turkish (Sorenson Duncan & Paradis, 2020). As in younger groups, frequent engagement to the language outside the classroom emerged as a decisive factor for long-term retention and proficiency.

At the national level, adult learners identified citizenship, adaptation, and cultural-religious familiarity as strong external drivers (Alkan, 2022; Dönmez Kara, 2015). Turkish proficiency was widely regarded as essential for civic participation and integration, while references to accessible citizenship pathways and geopolitical proximity highlighted the influence of macro-level conditions. Collectively, these findings suggest that adult learners benefit most when ecological layers align—when institutional support, cultural continuity, and everyday exposure converge to sustain motivation and foster meaningful linguistic development.

Conclusion

This study investigated the ecological background of learning Turkish as a second language across four educational levels—primary, secondary, high school, and adult learners—through Zumbo's ecological framework. Findings confirm that acquisition is shaped by interdependent variables nested within four ecological layers: personal characteristics, school context, family and out-of-school environment, and national-cultural factors. Across groups, consistent facilitators included exposure to Turkish, supportive instructional settings, and positive perceptions of Turkish culture. Teachers emerged as central agents, while family support and sociocultural alignment further reinforced learners' engagement. At the same time, heritage languages, neighborhood environments, and differing degrees of immersion critically influenced the learning process.

Layer-specific distinctions highlighted developmental shifts. Primary school learners benefited most from structured, teacher-centered practices, while secondary and high school students showed heightened sensitivity to curriculum design, peer interactions, and sociocultural barriers such as discrimination. Adult learners, by contrast, demonstrated explicitly goal-driven motivations tied to academic advancement, professional aspirations, and civic integration, with institutional programs and citizenship pathways playing decisive roles. Taken together, these findings demonstrate that applying an ecological lens to Turkish as a second language is not only useful but essential. Attending to learners' lived realities through in vivo insights enables educators and policymakers to design language programs that are contextually grounded, socially responsive, and developmentally appropriate across the lifespan

Limitations, Implications and Future Studies

This study has several limitations. First, as a qualitative inquiry, findings are context-specific and cannot be generalized beyond the four learner groups examined. Second, the data represent a single point in time; future changes in learners' circumstances may yield different outcomes (Van Der Stede, 2014). Third, the study focused exclusively on learners of Turkish as a second language within Türkiye, excluding the distinct dynamics of teaching Turkish as a foreign language abroad. Fourth, while participants identified ecological variables that shaped their learning, this study did not examine causal relationships among them. Finally, although the coding structure generated meaningful insights, additional variables may emerge in future research, broadening the ecological account of second language learning.

Despite these limitations, the study offers several implications. Applying an ecological lens provides valuable insights for researchers, educators, and policymakers by showing how contextual variables shape learners' emotional, motivational, and social profiles. For secondary school learners, the emergence of anxiety underscores the need for culturally responsive instruction and confidence-building strategies. Across all levels, the central role of teachers highlights the importance of specialized training programs for educators working with second language learners in Türkiye.

The prominence of motivation—both personal and family-related—signals the need for further research into motivational foundations and robust needs analyses to align instruction with learners' goals. Instructional materials should also be empirically informed, tailored to learners' academic and personal interests, and supported by intervention-based development. At a broader scale, the absence of national data infrastructures comparable to PISA or PIRLS constitutes a critical gap. Establishing a longitudinal database to monitor both linguistic and psychosocial dimensions of second language learners would provide a stronger foundation for research and policy planning.

Future studies could build on these findings through mixed-methods or quantitative approaches, such as structural equation modeling, to test the interplay of ecological factors. Embracing an ecological framework thus offers a flexible and context-sensitive pathway for advancing Turkish as a second language education, particularly within migration-influenced national contexts.

Statements and Declarations

***Funding*:** This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

***Institutional Review Board Statement*:** Ethical approval for the study was granted by the Yıldız Technical University Ethics Committee on 30.09.2024 (Meeting No: 2024.09), and the research process adhered to established ethical standards.

***Informed Consent Statement*:** Informed consent was obtained from all adult participants and from the legal guardians of minors. Confidentiality and anonymity were maintained throughout the study in accordance with institutional and international guidelines.

***Data availability statement*:** The data that support the findings of this study are available from

the corresponding author upon reasonable request. Due to ethical considerations and privacy regulations, full interview transcripts are not publicly shared.

***Acknowledgements*:** This article is based on the master's thesis titled "Determining the Ecological Background of the Processes of Learning Turkish as a Second Language: An Examination in Light of Zumbo's Ecological Framework," completed at Yıldız Technical University under the supervision of Assistant Professor Talha Göktentürk.

***Conflict of interest*:** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials: Supplementary materials can be accessed here: https://tnyurl.com-/5js8js33

References

Adem, H., & Berkessa, M. (2022). A case study of EFL teachers' practice of teaching speaking skills vis-à-vis the principles of Communicative Language Teaching (CLT). *Cogent Education*, *9*(1), 1–23. https://doi.org/10.1080/2331186x.-2022.2087458

Ak Başoğul, D. (2022). Input-based tasks in teaching Turkish as a foreign language. *Uluslararası Türkçe Edebiyat Kültür Eğitim (TEKE) Dergisi*, *11*(1), 315–340.

Albayrak, F. (2023). Yabancı dil olarak dilbilgisi öğretiminde dilbilgisel birimler: Ses ve biçim. In Y. Yılmaz & Ö. Çangal (Eds.), *Yurt dışında Türkoloji ve Türkçe öğretimi 2: Yabancılara Türkçe öğretimi* (pp. 159–192). FENOMEN & RumeliYA Publishing. https://www.fenomenyayincilik.com/Resimler/FckEditor/file/2.%20Kitap-Yabancılara%20Türkçe%20Öğretimi.pdf

Alkan, H. (2022). Caring (for) relations: Syrian refugees between gendered kin-contract and citizenship in Germany and Turkey. *Citizenship Studies*, *26*(6), 746–762. https://doi.org/10.-1080/13621025.2022.2103969

Amira, H. (2024). Psychological and educational approach in teaching and learning foreign languages. *Turkish Academic Research Review*, *9*(3), 242–258. https://doi.org/10.30622/tarr.-1466024

Amit, K., & Bar-Lev, S. (2015). Immigrants' sense of belonging to the host country: The role of life satisfaction, language proficiency, and religious motives. *Social Indicators Research*, *124*(3), 947–961. https://doi.org/10.1007/s11205-014-0823-3

Aras, B., & Mohammed, Z. (2019). The Turkish government scholarship program as a soft power tool. *Turkish Studies*, *20*(3), 421–441. https://doi.org/10.1080/14683849.2018.1502042

Ashton, M. C. (2023). *Individual differences and personality*. Elsevier.

Barın, E. (2004). Yabancılara Türkçe öğretiminde ilkeler. *Hacettepe Üniversitesi Türkiyat Araştırmaları*, *1*, 19–30.

Blyth, C. S., & Thoms, J. J. (2021). *Open education and second language learning and teaching: The rise of a new knowledge ecology* (Vol. 87). Multilingual Matters. https://books.google.com/books?hl=tr&lr=&id=cJsXEA-AAQBAJ&oi=fnd&pg=PA1958&dq=second+language+learning+and+ecology&ots=Ptmbdpkinn&sig=AFkiyNZ8h-OJgTqUNdrVj6ZSFpQ

Boeschoten, H. (2022). The speakers of Turkic languages. In L. Johanson & É. Á. Csató (Eds.), *The Turkic languages* (2nd ed., pp. 1–12). Routledge. https://doi.org/10.4324/9781003243809

Boylu, E., & Işık, P. (2019). The opinions of instructors of Turkish as foreign language to Syrian refugee children with rergard to the situations they have experienced. *Gazi University Gazi Faculty of Education Journal*, *39*(2), 895–936.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/-1478088706qp063oa

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Broughton, G., Brumfit, C., Flavell, R., Hill, P., & Pincas, A. (1980). *Teaching English as a foreign language* (2nd ed.). Routledge.

Brown, H. D., & Lee, H. (2025). *Principles of language learning and teaching: A course in second language acquisition*. Taylor & Francis. https://books.google.com/books?hl=tr&lr=&id=Xl-NQEQAAQBAJ&oi=fnd&pg=PA2003&dq=teacher+%26+second+language+learning&ots=Vp8HNMtsYW&sig=tsk1G4c24j8HRBBVl4v4_Rs4G5o

Çakar Turan, H. (2024). *Education-training procress of foreign students In formal enviroments in Turkey: A meta-synthesis study* [Master Thesis, Karamanoğlu Mehmet Bey University]. https://www.proquest.com/dissertations-theses/türkçeyi-yabancı-dil-olarak-öğrenme-verimliliğini/docview/3132875969/se-2?accountid=17384

Cheng, X., & Zhou, S. (2023). The influence mechanism of parental emotional companionship on children's second language acquisition. *Frontiers in Psychology*, *13*, 1–13. https://doi.org/10.3389/fpsyg.2022.1034867

Chomsky, N. (1965). *Aspects of the theory of syntax*. MIT press. https://www.google.com/books?hl=tr&lr=&id=ljFkBgAAQBAJ&oi=fnd&pg=PR5&dq=Chomsky,+N.+(1965).+Aspects+of+the+Theory+of+Syntax.+Cambridge,+MA:+MIT+Press.&ots=-GqERRLBlW&sig=ckflMWbX27GHaxDV9Y015IJSng

Chong, S. W., Isaacs, T., & McKinley, J. (2023). Ecological systems theory and second language research. *Language Teaching*, *56*(3), 333–348. https://doi.org/10.1017/S0261444822000283

Cook, V. (2016). *Second language learning and language teaching* (5th ed.). Routledge. https://doi.org/-10.4324/9781315883113

Council of Europe. (2020). *Common European Framework of Reference for Languages: Learning, teaching, assessment – Companion volume*. Council of Europe Publishing. http://www.-coe.int/lang-cefr

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications.

Creswell, J. W. (2016). *30 essential skills for the qualitative researcher*. Sage Publications.

Danzer, A. M., Feuerbaum, C., Piopiunik, M., & Woessmann, L. (2022). Growing up in ethnic enclaves: Language proficiency and educational attainment of immigrant children. *Journal of Population Economics*, *35*(3), 1297–1344. https://doi.org/10.1007/s00148-022-00889-y

Darvin, R., & Norton, B. (2023). Investment and motivation in language learning: What's the difference? *Language Teaching*, *56*(1), 29–40. https://doi.org/10.1017/s0261444821000057

De Jong, E. J., Coulter, Z., & Tsai, M.-C. (2023). Two-way bilingual education programs and sense of belonging: Perspectives from middle school students. *International Journal of Bilingual Education and Bilingualism*, *26*(1), 84–96. https://doi.org/10.1080/13670050.2020.1783635

Demirel, A., & Yalçın, Ç. (2021). The instructors' views on factors affecting the success of learners learning Turkish as a foreign language. *RumeliDE Journal of Language and Literature Studies*, *10*, 22–43. https://doi.org/10.29000-/rumelide.1009035

Dilek, S., Boyaci, B., & Yasar, E. (2018). Teaching Turkish as a second language to Syrian refugees. *Educational Research and Reviews*, *13*(18), 645–653.

Dong, Y., & Chow, B. W.-Y. (2022). Home literacy environment and English as a second language acquisition: A meta-analysis. *Language Learning and Development*, *18*(4), 485–499. https://doi.org/10.1080/15475441.2021.2003197

Dönmez Kara, C. Ö. (2015). *Göç bağlamında uluslararası işbirliği ve Türkiye'nin politikaları* [Doktora Tezi]. Çanakkale 18 Mart Üniversitesi.

Drobňák, M. (2025). Beyond nativism and empiricism: Mindshaping and language acquisition. In T. W. Zawidzki & Tison (Eds.), *The Routledge handbook of mindshaping* (pp. 123–136). Routledge.

Eigsti, I.-M. (2021). Theories of language development. In *Encyclopedia of Autism Spectrum Disorders* (pp. 4816–4821). Springer International Publishing. https://doi.org/10.1007/978-3-319-91280-6_543

Ekşi, S., & Demirkol, R. (2023). Elements of Turkish cultural transfer in teaching Turkish to foreigners: The example of Gazi for Foreigners. *International Journal of Language Academy*, *11*(1), 32–44. https://doi.org/10.29228-/ijla.66207

Er, M., & Durmuş, M. (2021). Instructors approaches to classroom communication and micro-aggression in teaching Turkish to foreigners. *Turkish Studies - Language and Literature*, *16*(3), 1873–1884. https://doi.org/10.7827/turkishstudies.51618

Eraslan, F., & Yücel, D. (2024). Examining the effect of using the A1-A2 project-based learning method in teaching Turkish to foreigners on success. *International Journal of Social Sciences*, *8*(35), 507–526.

Fisher, D., & Frey, N. (2021). *Better learning through structured teaching: A framework for the gradual release of responsibility*. ASCD. https://books.google.com/books?hl=tr&lr=&id=yLU6EA-AAQBAJ&oi=fnd&pg=PT145&dq=A+Framework+for+the+gradual+release+of+responsibility&ots=S9159_Jj11&sig=xe-E_1PTyx_IXV6RCKGrPFml3P5s

Flores, J. S., Huguet, À., Fernández-Costales, A., & Senar, F. (2025). The effect of perception of Spanish-speaking communities on the development of attitudes and motivation towards learning Spanish as a second language: A study in the Portuguese university context. *Journal of Multilingual and Multicultural Development*, 1–14. https://doi.org/10.1080/01434632.2025.2521426

Fox, J. D. (2003). From products to process: An ecological approach to bias detection. *International Journal of Testing*, *3*(1), 21–47. https://doi.org/10.1207/S15327574IJT0301_2

Friese, S. (2019). *ATLAS.ti 8 Mac user manual*. ATLAS.ti Scientific Software Development GmbH.

Gasca Jiménez, L., & Adrada-Rafael, S. (2021). Understanding heritage language learners' critical language awareness (CLA) in mixed language programs. *Languages*, *6*(1), 1–23. https://doi.org/10.3390/languages6010037

Göktentürk, T. (2016). *Yabancılara Türkçe öğretiminde ders materyalleri: Çok dilli bir sözlük örneği* [Master Thesis, Marmara University]. https://shorturl.at/bFMSW

Göktentürk, T. (2021). *DIF analysis of the PISA reading test according to the ecological model: The example of Turkey* [Doctoral Dissertation]. Yıldız Technical University.

Göktentürk, T., Sağlam, M. H., & Zumbo, B. D. (2023). New lens in assessment and evaluation of Turkish language with Zumbo's critical view of item responding. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, *33*, 223–245. https://doi.org/10.29000/rumelide.1285296

Griffiths, C., & Soruç, A. (2021). Individual differences in language learning and teaching: A Complex/dynamic/socio-ecological/holistic view. *English Teaching & Learning*, *45*(3), 339–353. https://doi.org/10.1007/s42321-021-00085-3

Gün, M., & Tüzmen, E. (2021). The use of traditional Turkish theater in teaching Turkish in textbook for foreigners. *Çukurova Research*, *7*(3), 454–469. https://doi.org/10.29228/cukar.52867

Güngör Yereyıkılmaz, F., & Güner Özer, M. (2025). Teaching Turkish as a second language: Research trends, results, and future perspectives. *Journal of Education and Future*, *28*, 153–169. https://doi.org/10.30786/jef.1628126

Hamzadayı, E., & Büyükikiz, K. K. (2015). The relationship between personality traits and self-efficacy perceptions of speaking skills of Turkish as a second language (TFL) learners. *Turkish Journal of Social Research*, *19*(1), 297–312.

Härkönen, U. (2001). *The Bronfenbrenner ecological systems theory of human development*. 1–19.

Heinonen, E., & Nissen-Lie, H. A. (2020). The professional and personal characteristics of effective psychotherapists: A systematic review. *Psychotherapy Research*, *30*(4), 417–432. https://doi.org/10.1080/10503307.2019.1620366

Hirschy, A. S., & Wilson, M. E. (2002). The sociology of the classroom and its influence on student learning. *Peabody Journal of Education*, *77*(3), 85–100. https://doi.org/10.1207/S15327930PJE7703_5

Holopainen, J., & Björkman, I. (2005). The personal characteristics of the successful expatriate: A critical review of the literature and an empirical investigation. *Personnel Review*, *34*(1), 37–50. https://doi.org/10.1108/00483480510578476

Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (Eds.), *Sociolinguistics* (pp. 269–293). Penguin.

İnal, M., & Çakır, R. (2021). Use of multimedia materials in teaching Turkish as a foreign langu-

age. *Journal of Interdisciplinary Education: Theory and Practice*, *3*(2), 87–112. https://doi.org/-10.47157/jietp.954946

İnce Yakar, H. G., & Fedai, Ö. (2022). Cultural awareness in Turkish teaching to foreigners. *RumeliDE Journal of Language and Literature Studies*, *11*, 115–137. https://doi.org/10.29000/rumelide.1146525

Kanas, A., Kosyakova, Y., & Vallizadeh, E. (2022). Linguistic enclaves, sorting, and language skills of immigrants. *Journal of Immigrant & Refugee Studies*, 1–15. https://doi.org/10.1080-/15562948.2022.2132572

Karapınar Kocağ, E., & Longhi, S. (2022). Individual attitudes towards immigration in Turkey: Evidence from the European social survey. *Societies*, *12*(6), 1–18. https://doi.org/10.3390-/soc12060194

Karatay, H., Kartallıoğlu, N., İpek, O., Karabuğa, H., Güngör, H., Tekin, G., & Kaya, S. (2019). *Akademik Türkçe* (H. Karatay, Ed.). Pegem Akademi.

Kardoğan, M. (2025). A study on the attitudes of refugee students studying in secondary schools in Türkiye towards learning Turkish. *Aydın TÖMER Dil Dergisi*, *10*(1), 99–123. https://doi.org/10.17932/IAU. TOMER.2016.019/tomer_v010i1004

Kerr, C., Nixon, A., & Wild, D. (2010). Assessing and demonstrating data saturation in qualitative inquiry supporting patient-reported outcomes research. *Expert Review of Pharmacoeconomics & Outcomes Research*, *10*(3), 269–281. https://doi.org/10.1586/erp.10.30

Kim, Y., & Kim, T.-Y. (2025). The dynamics of second-language learning experience and motivational variability: Focusing on a reflective autobiography. *System*, *132*, 1–13. https://doi.org/10.1016/j.system.2025.103713

Kılınç, A. (2021). The function of European Language Portfolio and Passport in foreign language education. *Iğdır Üniversitesi Sosyal Bilimler Dergisi*, *25*, 333–355.

Launeanu, M., & Hubley, A. M. (2017). Some observations on response processes research and its future theoretical and methodological directions. In B. D. Zumbo & A. Hubley (Eds.), *Understanding and investigating response processes in validation research* (p. XIII+370). Springer.

Lier, L. V. (2010). The ecology of language learning: Practice to theory, theory to practice. *Procedia - Social and Behavioral Sciences*, *3*, 2–6. https://doi.org/10.1016/j.sbspro.2010.07.005

Lightbown, P. M., & Spada, N. (2021). *How languages are learned* (5th ed.). Oxford University Press. https://books.google.com/books?hl=tr&lr=&id=7GUzEA-AAQBAJ&oi=fnd&pg=PT11&dq=Lightbown,+P.,+%26+Spada,+N.+M.+(2021).+How+languages+are+learned+(Fifth+edition).+Oxford+University+Press.&ots=dIT4cKzANU&sig=NOg6oVSoKlX3LaX_t42l3oAzKuM

Lin, J. (2023). The structural relationships among L2 motivation, out-of-class informal learning, and oral proficiency: A multiple-group structural equation modeling study. *Language Teaching Research*, 1–30. https://doi.org/10.1177-/13621688231189030

Liu, C. C., & Chung, K. K. H. (2024). Impacts of home literacy environment on children's English language learning as a second language. *European Journal of Psychology of Education*, *39*(2), 1421–1439. https://doi.org/10.1007/s10212-023-00745-x

Mahn, H. (2012). Vygotsky and second language acquisition. In C. A. Chapelle (Ed.), *The encyclopedia of applied linguistics* (pp. 1–8). Wiley. https://doi.org/10.1002/9781405198431.wbeal1272

Mansouri, B., Molana, K., & Nazari, M. (2021). The interconnection between second language teachers' language assessment literacy and professional agency: The mediating role of institutional policies. *System*, *103*, 1–11. https://doi.org/10.1016/j.system.2021.102674

Masson, M., Kunnas, M., Boreland, T., & Prasad, G. (2022). Developing an anti-biased, anti-racist stance in second language teacher education programs. *The Canadian Modern Language Review*, *78*(4), 385–414. https://doi.org/10.3138/-cmlr-2021-0100

McAuliffe, M., & Khadria, B. (Eds.) (with Bauloz, C., Kitimbo, A., Nguyen, M., Sawyer, A., & Qu, S.). (2019). *World migration report 2020*. International Organization for Migration (IOM).

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.

Mohamad Nor, N., & Rashid, R. A. (2018). A review of theoretical perspectives on language learning and acquisition. *Kasetsart Journal of Social Sciences*, *39*(1), 161–167. https://doi.org/10.1016/j.kjss.2017.12.012

Montero Perez, M. (2022). Second or foreign language learning through watching audio-visual input and the role of on-screen text. *Language Teaching*, *55*(2), 163–192. https://doi.org/-10.1017/S0261444821000501

Moralı, G. (2018). The problems faced in teaching Turkish as a foreign language to Syrian refugee children. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, *8*(15), 1426–1449. https://doi.org/10.26466/opus.443945

Oakley, L. (2004). *Cognitive development*. Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9780203482834/cognitive-development-lisa-oakley-cara-flanagan-phil-banyard

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: A synthesis of recommendations. *Academic Medicine*, *89*(9), 1245–1251. https://doi.org/10.1097/ACM.0-000000000000388

Ortega, L. (2014). *Understanding second language acquisition*. Routledge. https://doi.org/10.4324-/9780203777282

Pawlak, M., Csizér, K., Kruk, M., & Zawodniak, J. (2025). Investigating grit in second language learning: The role of individual difference factors and background variables. *Language Teaching Research*, *29*(5), 2093–2118. https://doi.org/10.1177/13621688221105775

Piccardo, E., & North, B. (2019). *The action-oriented approach: A dynamic vision of language education*. Multilingual Matters.

Pilarska, J. (2021). The constructivist paradigm and phenomenological qualitative research design. In A. Pabel, J. Pryce, & A. Anderson (Eds.), *Research Paradigm Considerations for Emerging Scholars* (pp. 64–83). Multilingual Matters. https://doi.org/10.21832/9781-845418281-008

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, *52*(2), 126–136. https://doi.org/10.1037/0022-0167.52.2.126

Powell, R. A., Symbaluk, D. G., & MacDonald, S. E. (2002). *Introduction to learning and behavior*. Wadsworth/Thomson Learning. https://psycnet.apa.org/record/2001-18226-000

Risager, K. (2021). Language textbooks: Windows to the world. *Language, Culture and Curriculum*, *34*(2), 119–132. https://doi.org/10.1080/079-08318.2020.1797767

Rutakumwa, R., Mugisha, J. O., Bernays, S., Kabunga, E., Tumwekwase, G., Mbonye, M., & Seeley, J. (2020). Conducting in-depth interviews with and without voice recorders: A comparative analysis. *Qualitative Research*, *20*(5), 565–581. https://doi.org/10.1177/1468794119884806

Sağlam, M. H., & Göktenturk, T. (2024). Mathematically high and low performances tell us different stories: Uncovering motivation-related factors via the ecological model. *Learning and Individual Differences*, *114*, 1–12. https://doi.org/10.1016/j.lindif.2024.102513

Sağlam, M. H., Göktentürk, T., & Lo, C. O. (2023). The factors explaining reading success of academically gifted readers through the ecological model. *Gifted Education International*, 1–25. https://doi.org/10.1177/02614294231170265

Sağlam, M. H., Göktentürk, T., & Yazıcı, E. (2022). The impact of the Idea Workshop Model (IWM) on attitudes towards Turkish as a foreign language. *Turkish Studies-Educational Sciences*, *17*(5), 1241–1258. https://doi.org/10.7827/TurkishStudies.64392

Schwartz, M., & Deeb, I. (2021). Toward a better understanding of the language conducive context: An ecological perspective on children's progress in the second language in bilingual preschool. *International Journal of Bilingual Education and Bilingualism*, *24*(4), 481–499. https://doi.org/10.1080/13670050.2018.1484424

Şenel, A., & Şengül, K. (2021). *The effect of activities suitable for communicative approach-based language learning strategies in teaching Turkish as a foreign language on success of listening skills* [Master Thesis, Nevşehir Hacı Bektaş Veli Üniversitesi]. https://acikerisim.nevsehir.edu.tr/handle/20.500.11787/6005

Shogren, K. A., Wehmeyer, M. L., Palmer, S. B., & Paek, Y. (2013). Exploring personal and

school environment characteristics that predict self-determination. *Exceptionality*, *21*(3), 147–157. https://doi.org/10.1080/09362835.-2013.802231

Şimşek, B., & Bozkırlı, K. Ç. (2024). Language needs analysis for teaching Turkish as a foreign language: A case study of Kafkas University Turkish Teaching Application and Research Center (TÖMER). *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, *Ö14*, 44–58. https://doi.org/10.29000/rumelide.1454358

Skinner, B. F. (1986). Is it behaviorism? *Behavioral and Brain Sciences*, *9*(4), 716–716. https://doi.org/10.1017/s0140525x00052031

Sorenson Duncan, T., & Paradis, J. (2020). Home language environment and children's second language acquisition: The special status of input from older siblings. *Journal of Child Language*, *47*(5), 982–1005. https://doi.org/-10.1017/S0305000919000977

Srivastava, P., & Hopwood, N. (2009). A practical iterative framework for qualitative data analysis. *International Journal of Qualitative Methods*, *8*(1), 76–84. https://doi.org/10.1177/16094-0690900800107

Stein, M. K., Remillard, J., Smith, M. S., & Lester, Jr., F. K. (2007). How curriculum influences student learning. In *Second handbook of research on mathematics teaching and learning* (p. 319). Information Age Publishing.

Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2019). Environmental factors and personal characteristics interact to yield high performance in domains. *Frontiers in Psychology*, *10*, 2804. https://doi.org/10.3389-/fpsyg.2019.02804

Sun, T., Wang, C., Lambert, R. G., & Liu, L. (2021). Relationship between second language English writing self-efficacy and achievement: A meta-regression analysis. *Journal of Second Language Writing*, *53*, 1–14. https://doi.org/-10.1016/j.jslw.2021.100817

Tanman, N. B., & Özgenel, M. (2021). Examining the factors affecting the Turkish learning levels of foreigners studying face-to-face and online: Ankara University TÖMER example. *İZÜ Eğitim Dergisi*, *3*(6), 128–148. https://doi.org/10.46423/izujed.1006011

Tanrıkulu, F. (2021). The use of face-to-face and mobile assisted peer tutoring in solving the language problems of Syrian refugees. *Mentoring & Tutoring: Partnership in Learning*, *29*(2), 215–237. https://doi.org/10.1080/13611267.-2021.1912469

Toluoğlu, F., & Çiftçi, H. (2022). The role of libraries in the integration process of Syrian refugees: The case of Kilis Elbeyli temporary accommodation center. *Turk Kutuphaneciligi - Turkish Librarianship*, *36*(1), 29–53. https://doi.org/10.24146/tk.1041490

Toprak Ay, N. İ., & Göktentürk, T. (2023). The impact of languages in the lives of secondary school students on reading achievement: A PISA-based study. *Milli Eğitim Dergisi*, *52*(1), 387–412. https://doi.org/10.37669/milliegitim.-1309248

TÜİK. (2024). *International migration statistics, 2024*. Turkish Statistical Institute. https://data.tuik.gov.tr/Bulten/Index?p=Uluslararasi-Goc-Istatistikleri-2024-54083

Turkish Maarif Foundation. (2020). *Türkçenin yabancı dil olarak öğretimi programı*. Turkish Maarif Foundation.

Türkiye Maarif Vakfı. (2019). *Yabancı dil olarak Türkçe öğretimi programı*. Türkiye Maarif Vakfı.

Tzuriel, D. (2021). The socio-cultural theory of Vygotsky. In *Social Interaction in Learning and Development* (pp. 53–66). Springer International Publishing. https://doi.org/10.1007/978-3-030-75692-5_3

Uysal, B. (2021). Yabancı dil öğretimi yaklaşımları. In Ü. Şen (Ed.), *Yabancı dil olarak Türkçe öğretimi* (2nd ed., pp. 24–41). Pegem Akademi. 10.14527/9786052415375

Van Der Stede, W. A. (2014). A manipulationist view of causality in cross-sectional survey research. *Accounting, Organizations and Society*, *39*(7), 567–574. https://doi.org/10.1016-/j.aos.2013.12.001

Vézina, S., & Bélanger, A. (2019). Impacts of education and immigration on the size and skills of the future workforce. *Demographic Research*, *41*, 331–366.

Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard University Press. https://www.google.com/books?hl=tr&lr=&id=RxjjUefze_oC&oi=fnd&pg=PA1&dq=Vygotsky,+L.+S.+(1978).+Mind+in+Soci-

ety:+The+Development+of+Higher+Psychological+Processes.+Cambridge,+MA:+Harvard+University+Press.&ots=okAXRZu1bv&sig=wCGYtmlq9fbIoW4wXas7iOqq1eg

Woods, M., Paulus, T., Atkins, D. P., & Macklin, R. (2016). Advancing qualitative research using qualitative data analysis software (QDAS)? Reviewing potential versus practice in published studies using ATLAS.ti and NVivo, 1994–2013. *Social Science Computer Review*, *34*(5), 597–617. https://doi.org/10.1177/-0894439315596311

Yazıcı, E., & Göktentürk, T. (2020). A new model in teaching Turkish as a foreign language: Culture Days. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, *19*, 48–77. https://doi.org/10.29000/rumelide.752111

Yıldırım, A., & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri* (10th ed.). Seçkin Yayınları.

Yıldız Yalçın, P., & Özdemir, C. (2025). A comparison of Turkish language teaching textbooks for foreigners in terms of grammar teaching strategies. *FusionMultidisiplinerJourna*, *1*(1), 57–67. https://doi.org/10.5281/ZENODO.-15699933

Yılmaz, F. (2017). Turkish academic language needs analysis in teaching Turkish as a foreign language. *International Journal of Language Academy*, *5*(17), 223–233. https://doi.org/10.-18033/ijla.3602

Yılmaz, H. G. (2021). *Comparison of theories, models and methods in second language acquisition and basic skills in teaching Turkish as a foreign language* [Master's Thesis, Dokuz Eylul Universitesi]. https://search.proquest.com/open-view/3921a2ef34de91f58a58988c83ff0382/1?pq-origsite=gscholar&cbl=2026366&-diss=y&casa_token=JIJz_rGDEtkAAAAA:ce-vEa3CjDnrJNQuQUsM5-q6i8XXW7rvpD1BbxkM6_4SMg-kuZ6zWMpcY9A4Zh34srGkzLhQyQTQ

Zhang, R., & Zou, D. (2024). Self-regulated second language learning: A review of types and benefits of strategies, modes of teacher support, and pedagogical implications. *Computer Assisted Language Learning*, *37*(4), 720–765. https://doi.org/10.1080/09588221.2022.2055081

Zhao, Y., & Lai, C. (2023). Technology and second language learning: Promises and problems. In L. L. Parker (Ed.), *Technology-mediated learning environments for young English learners: Connections in and out of school* (1st ed., pp. 167–206). Routledge. https://doi.org/10.4324-/9781003418009

Zumbo, B. D. (2017). Trending away from routine procedures, toward an ecologically informed In Vivo view of validation practices. *Measurement: Interdisciplinary Research and Perspectives*, *15*(3–4), 137–139.

Zumbo, B. D. (2023). A dialectic on validity: Explanation-focused and the many ways of being human. *International Journal of Assessment Tools in Education*, *10*(Special Issue), 1–96. https://doi.org/10.21449/ijate.1406304

Zumbo, B., Liu, Y., Wu, A., Shear, B., Olvera Astivia, O., & Ark, T. (2015). A methodology for Zumbo's third generation dif analyses and the ecology of item responding. *Language Assessment Quarterly an International Journal*, *12*(1), 136–151. https://doi.org/10.1080/15434-303.2014.972559