

## Dil Öğretmeni Bilişselliğine Genel Bir Bakış: Kuramın Kökeni, Kavramsal Özellikleri ve Güncel Araştırmalar \*

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### Öz

Bu makale, dil öğretmenlerinin sınıftaki kararlarını ve eylemlerini şekillendiren inançlara, bilgilere ve düşünme süreçlerini kapsayan dil öğretmeni bilişselliği hakkında genel bir bakış sunmaktadır. Bu makale, kavramın kökenini ve teorik yönlerini ortaya koymayı ve konu üzerine yapılan çalışmaların kısa bir derlemesini sunmaktadır. İncelemenin tartışması, bağlamsal faktörlerin dil öğretmenlerinin uygulamalarını etkileyen en yaygın faktörlerden olduğunu ve bu etkinin farklı bağlamlarda değişebileceğini ortaya koymaktadır. Bu makale kapsamında, dil öğretmeni bilişselliği üzerine yapılan güncel çalışmalar da taranmıştır. Ayrıca bu çalışma, zaman kısıtlamalarının ve inanç ile uygulama arasındaki tutarsızlığın, dil öğretmenlerinin uygulamalarını engelleyen yaygın faktörler olduğunu öne sürmektedir. Bu makalenin sonucunu olarak; gelecekteki çalışmalar, bağlamsal faktörleri ele almaya, sınıftaki zorlukların üstesinden gelmek için etkili stratejiler geliştirmeye, daha esnek müfredat kapsamında dil öğretmenlerinin uygulamalarını ve bilişlerini incelemeye ve dil eğitiminde öğrenci ve öğretmen bilişselliği arasındaki etkileşimi incelemeye odaklanabileceği önerilmektedir. Makale, dil öğretmeni biliş kavramının öğrenciler için anlamlı öğrenme ortamları yaratmaya daha fazla odaklanması gerektiğini ve araştırmacıların alanı daha verimli hale getirmenin yollarını bulması gerektiğini savunmaktadır.

**Anahtar Sözcükler:** Dil öğretmeni bilişselliği, ilişkili faktörler, güncel çalışmalar, araştırma derleme

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# An Overview of Language Teacher Cognition: Origin, Theoretical Aspects, and Current Research \*

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## Abstract

This paper provides an overview of language teacher cognition which refers to the beliefs, knowledge, and thinking processes that shape the language teachers' decisions and actions in the classroom. This paper lays out the origin of language teacher cognition, its theoretical aspects, and provides a brief review of the concept. The discussion of the review reveals that contextual factors are the most common ones that affect language teachers' practices, and their degree of effect may vary in different contexts. Recent research in language teacher cognition was also reviewed in the article. Moreover, the research suggests that time constraints and the discrepancy between belief and practice are common factors that hinder language teachers' practices. As a result of the review, some suggestions were made for future studies such as concentrating on addressing contextual factors, developing effective strategies for overcoming difficulties in the classroom, examining the practices and cognition of language teachers under more flexible curricula, and examining the interaction between student and teacher cognition in language education. The paper concludes by arguing that the concept of language teacher cognition must concentrate more on creating meaningful learning environments for students, and researchers ought to find ways to make the field more productive.

**Keywords:** Language teacher cognition, related factors, recent studies, research review

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## Introduction

The practice of teaching is more than solely transmitting information and there are many unobservable processes pertaining to what teachers do in classrooms and how they do it. It is evident that teachers have the role of being the decision-makers in achieving goals of a curriculum by choosing the right methods and techniques, sequence, and materials in their teaching, and they are affected by many factors such as their beliefs, experience, knowledge, and understanding while making these decisions (Borg, 2006). This complex relationship has been the topic of scientific research which has showed developments in the field for almost 50 years and has evolved into what is known as *teacher cognition* as a field of inquiry today.

Theoretical roots of teacher cognition dates back to 70s when teachers' personal characteristics, their teacher-training experiences, students' personal characteristics, interaction between teachers and students in the classroom were studied in a process-product approach (Borg, 2006). In late 70s, teachers' psychological processes and their practices became popular. Some approaches such as schema theory approach, reflection-in-action approach, pedagogical content knowledge approach, and practical argument approach were popular in explaining teacher thinking (Morine-Dersheimer, 1991). These approaches were all accumulative form of thoughts and knowledge of the teachers, and they demonstrated a process in which teachers' beliefs, knowledge, experience, and background affected their practice. With the increase in popularity in areas such as research on teacher's thinking, judgements, decisions, behavior, and knowledge in research, the argument that knowledge and beliefs are inseparable became prominent over time. With the development in these areas, *teacher cognition* was seen as the appropriate term for investigating teachers' knowledge, beliefs, experiences, and practices with an understanding that their "mental lives are a valuable research focus" (Borg, 2006, p. 35). In one of his earlier works, Borg (1998) defines teacher cognition as "stores of beliefs, knowledge, theories, assumptions, and attitudes that play a significant role in shaping teachers' instructional decisions" (p. 9).

One of the key characteristics of language teacher cognition is that it has a practical orientation; it aims to elicit an understanding that explains teachers' practices. Borg (2006) states that it is often "tacit, systematic and dynamic" (p. 272). Language teacher cognition is personally defined and context-sensitive. Each individual is different and their beliefs, knowledge, and practice are influenced by many factors.

Language teacher cognition can be understood from several different theoretical perspectives (Li, 2020). Cognitive perspective is the most prevailing one which entails information processing models with an emphasis on teacher knowledge, decisions, and instructions, and it views a teacher's cognitions as a fixed mental entity that includes assumptions and prepositions. In addition to other perspectives such as *interactionist perspective* which claims that a teacher's actions should be understood as entities that may be transformed or emerge as a result of interactions with students, and *discursive psychological perspective* which addresses cognition in a systematical interpretation of conversations and interactions, Li (2020) dedicates great attention to *sociocultural perspective* by drawing on the framework of Vygotsky's socio-cultural theory to explore language teacher cognition by stating that teaching is a social practice and interaction is essential in effective learning and teaching. Ngo (2018) also proposes that sociocultural theory can be adapted to create a theoretical framework and reconceptualizes teachers' experiences with human mediation to explain shifts in cognition, and concept (scientific and everyday concepts) mediation. Language teacher cognition was also associated with theories in other fields by researchers. Feryok (2010) makes an association between language teacher education and complexity theory. With an approach emphasizing that language teacher cognition is dynamic, she claims that systems are studied as wholes rather than in parts and focus should be on how they change over time. Feryok (2010) highlights that both complexity theory and language teacher cognition are dynamic, non-linear, and sensitive to initial conditions.

The scope of language teacher cognition is quite extensive and its relationship with teaching practice can shed light on processes of teaching of grammar, reading, listening, writing, speaking, and vocabulary (Borg, 2006). As Barnard and Burns (2012) explain, revealing the concept of language teacher cognition encompasses determining what language teachers know and believe about fundamental issues such as roles of students and teachers in language teaching, the place of grammar and other skills and subskills and the most suitable ways to teach them. What teachers know and believe in these matters have a multifaceted and significant interaction with their practice. Language teachers' cognition may also be influenced by their previous experiences of language learning at school or pedagogical training experience at universities, or in-service trainings at their institutions. In addition to their past, teachers' beliefs and knowledge may also be affected by their colleagues and superiors, and the interaction between themselves and their students. Although teachers may be affected by these factors, they do not always put these into practice. Moreover, learning and teaching take place in an environment which may

have certain physical and materialistic limitations which can influence a teacher's eagerness to act in accordance with their beliefs. These limitations include whether the classroom has technological infrastructure or flexible inventory such as movable chairs or desks etc. These limitations may also hinder a teacher's ability to fully put their belief into practice.

With such an extensive domain and historical roots, the language teacher cognition concept is still one of the most studied areas in language teaching (Burns, Freeman, & Edwards, 2015). This paper employs an integrative review approach as a review methodology. An integrative review paper "aims to assess, critique, and synthesize the literature on a research topic" (Snyder, 2020, p. 335). As such, the aim of this paper is to portray the extensive research conducted in this area by reviewing (1) the domain-specific curricular areas such as teaching grammar, reading, or pronunciation, (2) the context-specific areas such as institutional contexts or learner profiles, and (3) methodological differences in these studies.

### **Review of Research Related to Language Teacher Cognition**

Language teachers' cognitions represent a network of beliefs, knowledge, theories, attitudes images, assumptions, metaphors, conceptions, and perspectives. Borg (2006) states that the framework for language teacher cognition research can be generic; investigating the nature and processes of language teacher cognition such as planning and decision making, or it can be domain-specific; investigating curricular areas such as grammar, reading or other skills.

The first category for language teacher cognition is the *domain-specific curricular areas*. One of the most frequently studied domains in relation to language teacher cognition is teaching grammar. One of the earliest studies on language teacher cognition and grammar teaching by Borg (1999) characterizes grammar teaching as an enterprise defined by teachers' decisions which are affected by their cognitions about their learning, students, and self. A study conducted by Phipps (2009) tracked how Turkish EFL teachers taught grammar, and their beliefs about grammar teaching. The results reveal that the participants taught differently than their stated beliefs due to complex reasons related to classroom circumstances. One of the more recent studies in teacher cognition and grammar teaching conducted by Abduh and Algouzi (2021) who investigated language teachers in the Saudi context shows that although the teachers believed that communicative activities were effective and grammar should be practiced in meaningful contexts in group activities, their practices were traditional and teacher-centered. Askland's (2019) study illustrates that Norwegian EFL teachers mostly favored the deductive approach in teaching grammar and English is used predominantly in the classrooms; however, it can also be

observed that teachers do not teach grammar very often in the classroom. When compared to Askland's study, Wangchuk, Wangchuk, Sharma and Dorji (2021) portray a different picture. Their study reveal that English teachers in Bhutan hold the belief that grammar should be taught explicitly by explaining rules and structures, and the researchers connect their beliefs with having low accessibility to an English-speaking environment. In Turkish context, Başar (2020) who investigated the grammar teaching practices of four ELT teachers and their beliefs towards grammar instruction. The results show that while two teachers performed consistently with their beliefs, the teaching practices of the other two teachers showed inconsistencies when compared to their beliefs and their practices are affected by contextual factors such as time constraints, materials and syllabus, and exams. On contrary to Başar's findings on teachers' beliefs, Uysal and Bardakçı (2014) illustrate that Turkish teachers believe that traditional approaches such as explicit grammar teaching, use of the mother tongue, and repetition are favorable when teaching English. Teachers in their study believed that communicative activities may come after teaching grammar and their classrooms were teacher-centered with use of translations and explicit explanations. Also in Turkish context, Tülüçe's (2019) study provides insights from a case study with an experienced teacher; Suna. Although her practice shows consistency with her beliefs in general, there were two specific inconsistencies. Suna believes that the most effective way of teaching grammar was Present-Practice-Produce (PPP) and she mostly followed the procedures of the model; however, her practice often lacked the practice aspect. Moreover, there was an inconsistency of belief and practice in Suna's teaching regarding introducing grammar in a contextualized manner. Suna, the participant teacher, explained that these inconsistencies were due to lack of time and high workload and that the syllabus was not flexible. The aforementioned studies generally show that language teachers' practices contradicted with their beliefs, and they explain that there are contextual reasons behind this contradiction.

Considerable attention was given in the literature on teacher cognition to the teaching of pronunciation. Baker (2011) examined the pronunciation teaching beliefs and practices of five ESL teachers. The results of the study show that post-graduate education has a positive effect on language teachers' cognition and practices of teaching pronunciation. Despite the common belief among teachers towards using guided activities such as information gap activities and mutual exchanges, teachers in the study mostly used controlled activities such as explanations and repetition, and there was a lack of guided activities. Similarly, Couper (2016) illustrates that Uruguayan EFL teachers acknowledge the importance of contextualizing their instructions and using drills in the classroom while teaching pronunciation; however, most of them complain that

teaching pronunciation could not find its way into the classroom due to a packed curriculum, or their own pronunciation anxiety. Findings of another study conducted by Buss (2016) show that although Brazilian EFL teachers hold positive perceptions and informed views on teaching pronunciation, their practices were traditional such as explanation and repetition, and the teachers stated that they might benefit from training on teaching of pronunciation. Although teaching of grammar and pronunciation gained relatively more popularity in the recent years, other domains such as teaching of writing (Cheng & Zhang, 2021; Gusevik, 2020; Ngo, 2018; Yiğitoğlu & Belcher, 2014), reading (Gilje, 2014; Tabata-Sandom, 2020), vocabulary (Hermagustiana, Hamra, Rahman, & Salija, 2017), and listening (Jones, 2020) also received attention in the literature related to language teacher cognition. These studies tackling domain-specific areas revealed that teachers' own learning experiences may affect their instructional decision-making.

In addition to research on the aforementioned domain-specific curricular areas, recent studies also attempted to define, re-define, and expand the *context-specific areas* that affect teachers' practices or cognitions. Öztürk and Gürbüz (2017) state that there are three categories of factors which affect a language teachers' decision making which in return determines the teaching practice. These three categories are *the learner profile of the students* which includes their proficiency, attention, enthusiasm or motivation, *institutional context* which includes organizational atmosphere, curriculum policies, and testing policies, and *improvisational teaching* which is a teacher's ability to make spontaneous decisions in classrooms. Öztürk and Gürbüz (2017) also list the sources of EFL teachers' cognition as "prior language learning experiences" as the causal condition, "pre-service education" as the core phenomenon, "previous institutional contexts" as the context, "novice years as a teacher" as intervening condition, and "teaching experiences" as a strategy (p. 12). These sources work in a model in which language teacher cognition is formed. Teacher identity also found its way into the list of sources that define language teacher cognition in recent years. Burri, Chen, and Baker (2017) claim that language teachers' identity not only affects but also mediates the formation of language teacher cognition. A more recent publication by Burri and Baker (2021) also places identity, practices, and cognitions at the center of their framework for preparing pronunciation instructors and claims that cognition is an overarching construct whereas the plural form, *cognitions*, incorporate teachers' different types of beliefs and knowledge. One of the recent studies also aimed to create a framework that included teacher identity, participation in communities of practice, teacher biography, and teacher emotions (Yazan, 2018).

Finally, a *methodological review* of these studies showed that language teacher cognition as a field of scientific inquiry calls for exploration and description of the complexity of language education without any attempt of generalization with a reductionist approach in research methodology. Examination of a teacher's cognition includes investigating their cases by gathering information about their educational background, their relationship with students, colleagues and administrators, as well as their beliefs and knowledge about how language is acquired, taught and learned with thick descriptions followed by interpretations on the discrepancies and concordances between what teachers believe and what they actually put into practice (Barnard & Burns, 2012). The concept was studied in both quantitative, qualitative, and mixed research designs with a variety of data collection tools such as interviews, questionnaires, reflective notes, focus groups, observations, and narratives. Thanks to the varying research designs and data collection tools, data triangulation enabled many studies to report their findings with analyses confirming each other. As Baker (2011) states, observing pedagogical practice can only provide a tinted window of perspective into looking at language teachers' cognition; therefore, most studies made use of interviews to examine teachers' beliefs, knowledge, experience, and schooling, and confront and inquire teachers on consistencies and inconsistencies of their teaching practices and collect insights into the factors on the issue. Researchers also made use of metaphors in language teacher cognition research (Seferoğlu & Korkmazgil, & Ölçü, 2009; Tabata-Sandom, 2020). Since language teacher cognition is a dynamic concept, scholars in the field also examined its effect in longitudinal studies which investigated in-service teachers' or pre-service teachers' experiences in teacher training, the changes in their beliefs, decision-making processes, and cognitions over long periods of time ranging from a year to six years by making use of classroom observations, interviews and document analyses (Bulut-Albaba, 2017; Burri & Baker, 2021; Mattheoudakis, 2007; Özmen, 2012; Peacock, 2001; Phipps, 2009). The longitudinal studies show that language teacher cognition is a concept that needs much investment by a researcher with various and rigorous data collection and detailed analysis of the collected data.

## **Discussion**

As illustrated by the review of literature, the research on language teacher cognition made a significant contribution to the understanding of how teachers learn, what they do, and how they form cognitive bases for their actions. The review revealed many studies in terms of domains, contexts, and methodologies. While some studies included personal factors such as pronunciation anxiety, or prior learning and teaching experiences among language teachers,



contextual factors were the most common ones which affected language teachers' practices in the aforementioned studies. It is evident that the contextual factors and their degree of effect on language education may differ in every country, city, or even district. This degree of effect was demonstrated in three different of the aforementioned studies which were conducted in the same national context but showed significant similarities and differences in their results (Başar, 2020; Tülüce, 2019; Uysal & Bardakçı, 2014). The comparisons in some studies (Askland, 2019 & Wangchuk et al., 2021) showed that having access to English-speaking environments also plays a role in shaping language teachers' practices in teaching, and presumably their beliefs.

Time constraint was another common factor that affected language teachers' practices. This factor is also prominent in Turkey due to the need to prepare students for central exams. Turkish educational system is highly dependent on high-stakes central exams which have a broad range of topics to cover in schools (Kılıçkaya, 2016). Teachers also need much time to follow an agenda which prepares their students for the central exams. It is a bitter dilemma that teachers in Turkey often face two options: to teach English communicatively or explicitly. The choice between the two options is also affected by the requests from students' parents and school administrators. The aforementioned conditions can also explain the immense effect of the discrepancy between language teacher beliefs and practice. Teachers in Turkey may face resistance from parents and administrators, or even the ministry when attempting to implement activities outside the curriculum. The issue behind this resistance may be related to the fact that, for example, not every student can have the economic opportunity to buy a supplementary book or even produce copies of a material brought to the classroom by the teacher. Teachers also face with the issue of having to allocate their own time and money in producing fun and interesting materials in classroom or bringing supplementary work sheets in their classrooms. In addition to these factors, as previously mentioned, the infrastructure of educational environment may even hinder teachers' practice. Having fixed seats in classrooms make it difficult to have group activities; thus, even though teachers may believe that the best practice is to have group work in the class, their practice may not align with their belief. Future research may attempt to discover new ways which can reduce the effect of these contextual factors or compensate for the constraints that the teachers face. Furthermore, some studies claim that the inconsistencies between belief and practice may be reduced in time as teachers gain experience; therefore, longitudinal studies can offer ways to track the effect of experience on language teacher cognition.

It is evident that because language teacher cognition is a highly personalized concept, conducting research in this area with participation of new in-service and pre-service teachers in different local contexts contributes to our knowledge on understanding how teachers' practices are affected by their cognition. However, in the special issue published by *Modern Language Journal* in 2015, researchers call for re-drawing the boundaries of the concept and the special issue posits that language teacher cognition is at a crossroads. On one hand, the concept sheds light on the complex inner dynamics of language teachers' practices, and on the other hand, it still needs to address the question: "How do language teachers create meaningful learning environments for their students? ... and if it strives to be relevant, it needs to address the field in more productive ways" (Kubanyiova & Feryok, 2015, p. 435). On these grounds, it can be recommended that for example, future research may attempt to find ways to deal with or design productive means to address the frequently listed contextual factors which affect teachers' practice in the classroom. Studies may also list strategies and decisions that teachers use in dealing with challenges in the way of their practice. Examples of such studies in the literature outline the teachers' (or preservice teachers') decision-making processes in instruction and overcoming challenges related to learners, resources and educational policies (Çimen & Daloğlu, 2019; Çimen & Karaman, 2014). Another common factor stated by participant teachers in the aforementioned studies was packed or inflexible syllabi; therefore, investigating language teachers' practices and cognition in the classroom which employs a more flexible syllabus such as negotiated syllabus can be an area of interest for future research. Despite the body of research on language teacher cognition, there is still little known about "how cognition relates to students' language learning experience in these teachers' classrooms" (Kubanyiova & Feryok, 2015, p. 436). Future research may include more participation of students and their perspectives and look into the relationship between student and teacher cognition in language education. One example of such studies was conducted by who revealed that students' beliefs changed over time in accordance with teacher views (Cephe & Yalçın, 2015).

Simon Borg states that since language teacher cognition is an invisible concept that needs eliciting information, visual means of gathering data such as drawing may be useful in future research (The TEFLology Podcast, 2018). To this end, it can be suggested that during the COVID-19 pandemic a recently trending methodology named '*Online Photovoice*' may come in handy in gathering more visual data supported by narratives of teachers (Doyumğaç, Tanhan, & Kıymaz, 2020). Borg asserts in the interview that language teacher cognition is an expanding concept and new relationships are being studied with it. Affective factors such as emotion did

not see relatively much attention in recent studies, and in his opinion, teacher emotion is an area which may attract interest in future research (Golombek, 2015). Moreover, using methodological tools such as and conversation analysis and discourse analysis can help explore the nature of the relationship between the practices and beliefs of language teachers. With the global effect of COVID-19 pandemic, language teacher's cognition about online teaching can be expected to be studied more in future studies (Gao & Zhang, 2020).

## **Conclusion**

To summarize, this paper attempted to outline language teacher cognition, its scope, theoretical aspects, and approaches in the literature by presenting some of the early studies in its emergence and recent publications on the concept. It was clear in the review of the articles that language teachers' cognition and their practice do not always show concordance. For example, most teachers underscored the importance of teaching pronunciation and stated that it should be taught with contextualization; however, they either taught pronunciation in traditional ways or did not allocate any time to its teaching at all. It was the same case for teaching grammar; although most teachers believed that grammar should not be taught explicitly, they often used explicit instructions. Many teachers explained these contradictions with factors such as time constraints, packed curriculum, lack of knowledge, training, or resources.

Recent publications on language teacher cognition showed that the concept has been expanding. New concepts such as teacher identity, or affective factors such as emotion are being associated with language teacher cognition. Researchers also claim that although recent studies have been providing data on the nature of language teacher cognition, the concept still needs to address the field in more productive ways.

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