

Metalinguistic awareness and teacher self-efficacy beliefs of language teachers: A correlational study on prospective Turkish teachers

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Article Info

Keywords

Metalinguistic awareness
Turkish teaching
Prospective teachers
Teacher self-efficacy

Article History

Received 04.011.2023
Received in revised form
14.12.2023
Accepted 17.12.2023

Article Type

Research Article



Abstract

The concept of metalinguistic awareness, which refers to knowing and consciously applying the structural features of the language that people speak, is a concept related to being able to understand the language. It can be said that these skills are expected to be acquired by those who will teach language lessons. Because these teachers transfer all aspects of language to students. Thus, the aim of this study is to examine the relationship between Turkish teacher candidates' meta-linguistic awareness and teacher self-efficacy beliefs. For this purpose, 308 prospective Turkish language teachers were reached. Since these prospective Turkish teachers should have taken most of the skills and teaching courses, the students were selected from the 3rd and 4th grades. "Turkish Metalinguistic Awareness Scale", "Self Efficacy Belief Scale in Turkish Language Teaching" and "Teachers' Sense of Efficacy Scale" were used as data collection tools. In the analysis of the data, t-test, correlation analysis and regression analysis were used. According to the findings of the study, it was concluded that metalinguistic awareness significantly predicted Turkish language teaching self-efficacy and teachers' sense of efficacy.

1 Introduction

Metalinguistic awareness is one of the topics of study in language teaching and learning. Since there is much debate about the nature, functions and typical age of onset of metalinguistic awareness, it is difficult to be specific in defining it (Pratt & Grieve, 1984, p. 2). Thus, metalinguistic awareness is generally explained as the ability to consciously know, think, and make judgements about the nature and structure of a relevant language (Edwards & Kiskpatrick, 1999; Gaux & Gombert, 1999; Gombert, 1992; Nagy & Anderson, 1995). Nagy (2007, p. 53) considers reflecting on or changing the order of words in a written or spoken sentence (i.e. syntactic awareness) as a metalinguistic awareness. Thus, metalinguistic awareness covers not only spoken but also written language. In studies on metalinguistic awareness, it can be said to be related to the language user's ability to understand, analyze, and manipulate language. "Metalinguistic awareness is not typical of normal language use; people usually attend to the message being conveyed rather than to the

Cite: Çinpolat, E., & Akdi, V. (2023). Metalinguistic awareness and teacher self-efficacy beliefs of language teachers: A correlational study on prospective Turkish teachers. *Pedagogical Perspective*, 2(2), 158-168. <https://doi.org/10.29329/pedper.2023.16>

linguistic elements which convey it” (Nagy & Anderson, 1995, p. 2). In addition, Teplitz (2019, p. 184) states that metalinguistic knowledge is acquired through detailed linguistic knowledge of a language.

Sayar and Turan (2012) stated that the term metalinguistics is a structure that includes different skills. These skills include making correct decisions regarding the division of sentences into words, words into syllables and phonemes, deriving correct words, creating harmonious structures, and making word puns. Having knowledge about these and similar language elements and conducting analyses is a mental process. Therefore, phonological, semantic, syntactic, pragmatic, and morphological awareness skills constitute the scope of metalinguistic awareness (Sayar & Turan, 2012, p. 50). Gombert (1992) also states that metalinguistic awareness is a general term that includes semantic, syntactic, pragmatic, morphological and phonological awareness and that metalinguistic awareness refers to the ability to consciously think about the structural features of language and to deliberately control them. Varışoğlu (2018) examined the sub-dimensions of metalinguistic awareness, such as phonological, morphological, syntactic, and semantic awareness, and created a scale by examining Turkish metalinguistic awareness with sub-factors of phonological, morphological, semantic, syntactic, communicative, and cultural awareness. Different aspects of metalinguistic awareness have been examined by bringing various perspectives into the studies conducted. Thus, it can be seen that the concept of metalinguistic awareness, which constitutes a holistic structure, is divided into sub-factors.

In the relevant literature, there are studies examining the relationship between metalinguistic awareness and various achievement indicators. In this context, metalinguistic awareness has been analyzed in both native and foreign language contexts. Flood and Menyuk (1983) conclude that reading achievement is related to metalinguistic awareness. Gini, Benelli, and Belacchi (2004, p. 259) found that metalinguistic awareness was related to language grades in 6-year-old children, while at the end of primary school metalinguistic awareness was also related to language acquisition and mathematical reasoning in different disciplinary areas. Jean Dreher and Zenge (1990) reported that metalinguistic awareness significantly predicted reading comprehension achievement of 3rd and 5th grade students. In Spellerberg’s (2016) study, which offers a broader perspective, metalinguistic awareness was found to be related to students’ success in courses in the school graduation exam. Metalinguistic awareness is a concept related to native language education and success in other courses. Similar results have been reported in the literature on foreign language learning and teaching. Aydın’s (2018) study stated that the metalinguistic knowledge of foreign language learners was a significant predictor of their writing achievement scores. In a study conducted by Al-Ahdal and Almarshedi (2022), a significant relationship was found between EFL learners' metalinguistic awareness and foreign language achievement. Şeref and Varışoğlu (2020, p. 969) state that the metalinguistic awareness of pre-service teachers is important, as they are important partners in mother tongue or foreign language teaching. According to Andrews (1997, p. 149) metalinguistic awareness “helps to emphasise the extra dimension of cognitions and reflections about language competence and communicative competence which is required by the language teacher in addition to the language awareness exhibited by any competent user of a language who consciously manipulates that language in order to achieve specific communicative purposes.” Furthermore, Andrews (1999, p. 216) states, “there is considerable evidence that TMA (Teacher Metalinguistic Awareness) has a marked effect upon the teacher's performance of a number of tasks widely believed to facilitate learning.”

Teacher self-efficacy, another element analyzed within the scope of the research, was also

examined as an additional factor in student achievement (Pajares, 1996). Self-efficacy is defined as an individual's perceived ability to perform a desired activity (Bandura, 1986). The concept of self-efficacy involves the ability of individuals to plan and perform their actions to achieve a certain level; it is related to the individual's belief that he/she can accomplish a task, and these beliefs shape their performance towards events that affect their lives and determine their world of feelings and ideas, motivation, and behavior (Bandura, 1994). As can be seen, the concept of self-efficacy is stated to be effective on the performances of individuals against various events. In this context, the scope of the teaching profession is examined domain-specifically through the concept of teacher self-efficacy. Teacher self-efficacy is defined as individual beliefs in the teacher's ability to fulfil certain teaching tasks at a certain quality level in a given situation (Dellinger, Bobbett, Oliver, & Ellett, 2008, p. 752). When the related literature is analyzed, it is seen that teacher efficacy is a factor affecting teaching outcomes. Teacher efficacy is related to willingness to teach (Allinder, 1994; Soodak & Podell, 1993) and is positively related to student achievement (Ashton & Webb, 1986; Moore & Esselman, 1992).

Teacher self-efficacy has a significant impact on teaching outcomes and quality. Existing literature shows that metalinguistic awareness is crucial in language teaching. It can be considered a necessary requirement for prospective teachers who are going to carry out Turkish language teaching courses to have Turkish metalinguistic awareness. In this regard, a potential correlation may exist between language teachers' metalinguistic awareness and self-perceived success in language instruction. This study aimed to provide insights into the metalinguistic awareness and teaching self-efficacy of Turkish language prospective teachers, thereby contributing to the related literature.

Thus, this study aimed to examine the correlational relationship between prospective Turkish teachers' Turkish metalinguistic awareness, Turkish teaching self-efficacy perceptions, and teachers' sense of efficacy.

2 Method

The Methods section includes the research design, sampling procedure, data collection instruments, data analysis, and issues of validity, reliability, and ethics.

2.1 Design

This study was designed as a correlational study using quantitative methods. Correlational research is a type of research used to explain the relationships between variables (Christensen et al., 2015). "In their simplest form, correlational studies investigate the possibility of relationships between only two variables, although investigations of more than two variables are common" (Fraenkel, Wallen, & Hyun, 2023, p. 325). The examination of the relationship without any intervention in the variables is also considered an important and fundamental feature of correlational research. Thus, the relationships between prospective Turkish teachers' metalinguistic awareness, Turkish teaching self-efficacy perception, and teacher efficacy perception were analyzed without any intervention.

2.2 Participants and procedure

The study group consisted of 308 Turkish language teaching 3rd and 4th year undergraduate students. Of these, 96 (31.2%) were male and 212 (68.8%) were female. Of the participants, 158 (51.3 %) were 3rd grade students, and 150 (48.7%) were 4th grade students. As the dependent

variable was teaching self-efficacy, data were not collected from first- and second-year students. It was decided that the students to be sampled would take more than half of the department courses. There were 68 courses in the Turkish teacher training framework prepared by the Council of Higher Education (2018). 38 of these courses (55.88%) were conducted in the first and second years. For this reason, it was deemed necessary for the students included in the sample to have completed most of the courses on teaching to use a measurement tool for teaching self-efficacy.

The study group was determined using the cluster sampling method as the population group studied was distributed throughout Türkiye. “By cluster sampling, the researcher can select a specific number of schools and test all the students in those selected schools, i.e. a geographically close cluster is sampled” (Cohen, Manion & Morrison, 2018, p. 216). The sample group comprised students from 10 state universities who volunteered and completed more than half of the department courses. The data were collected in a controlled online environment.

2.3 Measures

The Turkish Metalinguistic Awareness Scale: This scale was developed by Varışoğlu (2018). The scale, developed with the participation of prospective teachers as 41 items and six factors, has a 4-point Likert-type evaluation. Phonological, morphological, semantic, syntactic, communicative, and cultural awareness constitute the sub-factors of the scale. The alpha reliability of the scale is as .87.

Self Efficacy Belief Scale in Turkish Language Teaching: The scale developed by Çocuk, Alıcı, and Çakır (2015) includes 22 items and 4 factors. The scale has a 10-level evaluation type. Individualizing and directing the process in Turkish language teaching, benefiting from technology and material development in Turkish language teaching, measurement and evaluation in Turkish language teaching, and professional–academic development in Turkish language teaching constitute four sub-factors. The Cronbach’s alpha reliability of the scale was stated as .94.

Teachers’ Sense of Efficacy Scale: The scale adapted into Turkish by Çapa, Çakıroğlu, and Sarıkaya (2005) has 24 items and three factors. These factors are Student Engagement (SE), Instructional Strategies (IS), and Classroom Management (CM). The scale has a 9-point Likert-type evaluation. The participants in the adaptation study consisted of prospective teachers. The Cronbach’s alpha reliability of the scale was stated as .93.

2.4 Data analysis

Jamovi (2023) software was used for the data analysis. The techniques used in the data analysis were selected according to normality values. According to George and Mallery (2003), skewness and kurtosis coefficients between -2 and +2, and according to Tabachnick and Fidell (2007) between -1.5 and +1.5 are considered sufficient to assume that the distribution is normal. When the skewness and kurtosis coefficients approach zero, the normality of the distribution increases (Tabachnick and Fidell, 2007). Because the skewness and kurtosis of the scores obtained from the measurement tools take values between - 1 and + 1 it can be said that the data show a normal distribution. Therefore, parametric tests were used in the analysis. The Pearson product-moment correlation coefficient, independent groups t-test, and simple linear regression analysis were used.

2.5 Validity, reliability, and ethical considerations

Validity and reliability analyses of the data collection tools used in the study were conducted in the studies mentioned in the instruments section. Within the scope of this study, the Cronbach's

α and McDonald's ω values of the measurement tools were reported. Accordingly, the Cronbach's α and McDonald's ω values of the Turkish Metalinguistic Awareness Scale were .94. Cronbach's α coefficient of the Self-Efficacy Belief Scale in Turkish Language Teaching was .94, and McDonald's ω coefficient was .95. The coefficient of the Teachers' Sense of Efficacy Scale was .95, and the McDonald's ω coefficient was .96. According to these values, the internal consistency of the scales used in this study was sufficient. It is stated that values above .90 are very highly reliable (Cohen, Manion, & Morrison, 2018, p. 774).

The ethical procedures recommended by the American Psychological Association (APA, 2020) were followed. The participants were included in the study in accordance with the principle of voluntariness. Approval was obtained from all participants. Information to identify participants (name, surname, etc.) was not requested. Along with personal privacy, the reputation and rights of participants were secured. Participants were informed that they could withdraw from the study in any part of the research without stating a reason. The researchers meticulously adopted the principle of transparency in the analysis and reporting processes.

3 Findings

Analyses of the applied scales according to gender and grade level are given below.

Table 1 Independent samples t-test – gender

		Statistic	df	p
Metalinguistic	t	-0.634	306	0.526
Turkish Teaching Self Efficacy	t	-1.500	306	0.135
Teachers' Sense of Efficacy	t	-0.313	306	0.754

As shown in Table 1, the metalinguistic awareness, Turkish language teaching self-efficacy, and teaching efficacy perceptions of prospective Turkish teachers did not differ significantly according to gender. According to this, the gender of prospective teachers does not have a significant role in the analyzed situations.

Table 2 Independent samples t-test – grade

		Statistic	df	p
Metalinguistic	t	-1.032	306	0.303
Turkish Teaching Self Efficacy	t	0.825	306	0.410
Teachers' Sense of Efficacy	t	0.482	306	0.630

Table 2 shows that the metalinguistic awareness, Turkish language teaching self-efficacy, and teaching efficacy perceptions of prospective Turkish teachers did not differ significantly according to the grade level variable. According to this, the grade levels of prospective teachers do not have a significant role in the analyzed situations.

The relationships between prospective Turkish teachers' metalinguistic awareness, perception of Turkish teaching self-efficacy, and perception of teacher efficacy are analyzed below.

Table 3 Correlation matrix

	F1	F2	F3	F4	F5	F6	MLA	TTSE	TSE
F1	—								
F2	0.685*	—							
F3	0.633*	0.611*	—						
F4	0.685*	0.723*	0.706*	—					
F5	0.592*	0.561*	0.686*	0.666*	—				
F6	0.601*	0.527*	0.690*	0.667*	0.759*	—			
MLA	0.832*	0.813*	0.856*	0.880*	0.836*	0.840*	—		

TTSE	0.400*	0.360*	0.412*	0.417*	0.413*	0.451*	0.485*	—	—
TSE	0.352*	0.342*	0.399*	0.461*	0.440*	0.418*	0.476*	0.780*	—

Note. *: $p < .001$, F1: Phonological Awareness, F2: Morphological Awareness, F3: Semantic Awareness, F4: Syntactic Awareness, F5: Communicative Awareness, F6: Cultural Awareness, MLA: Metalinguistic Awareness, TTSE: Turkish Language Teaching Self Efficacy, TSE: Teachers' Sense of Efficacy

According to Table 3, there are moderately significant relationships between the metalinguistic awareness scale and its sub-dimensions and the Turkish language teaching self-efficacy perceptions and teacher efficacy perceptions of prospective Turkish teachers. Accordingly, there was a significant relationship between metalinguistic awareness and Turkish teachers' self-efficacy perceptions at the level of $r = .485$, $p < .001$. There was a significant relationship between metalinguistic awareness and teacher efficacy perceptions at the $r = .476$, $p < .001$ level.

Below, the results of a simple linear regression between prospective Turkish teachers' metalinguistic awareness, Turkish teaching self-efficacy perception, and teacher efficacy perception are presented. Regression analyses were performed twice: between metalinguistic awareness and perception of Turkish teaching self-efficacy, and between metalinguistic awareness and teacher efficacy. Turkish language teaching self-efficacy perception and teacher efficacy perception were considered dependent variables.

Table 4 Model coefficients – Turkish language teaching self efficacy

Predictor	Estimate	SE	95% Confidence Interval		t	p	Stand. Estimate	95% Confidence Interval	
			Lower	Upper				Lower	Upper
Intercept	16.8	6.35	4.26	29.3	2.64	0.009			
MLA	17.5	1.80	13.94	21.0	9.70	< .001	0.485	0.387	0.583

Note. $R^2 = .23$, MLA=Metalinguistic Awareness

First, the assumptions of the simple linear regression analysis, in which the dependent variable was self-efficacy perception of Turkish language teaching, were examined. Accordingly, the Durbin–Watson value ($DW = 1.92$) and variance inflation factor ($VIF = 1.00$) were determined, and regression analysis was continued according to the results obtained (Field, 2013). Thus, the necessary preconditions are met. The results of the simple linear regression analysis in Table 4 show that metalinguistic awareness explained 23% of the total variance in Turkish language teaching self-efficacy perception ($F_{(1, 306)} = 94.2$, $p < .001$). The positive contribution of metalinguistic awareness to the regression model was significant ($\beta = .48$, $p < .001$).

Table 5 Model coefficients – Teachers' sense of efficacy

Predictor	Estimate	SE	95% Confidence Interval		t	p	Stand. Estimate	95% Confidence Interval	
			Lower	Upper				Lower	Upper
Intercept	2.79	0.477	1.85	3.73	5.85	< .001			
MLA	1.28	0.135	1.01	1.54	9.46	< .001	0.476	0.377	0.575

Note. $R^2 = .22$, MLA=Metalinguistic Awareness

The necessary prerequisites for simple linear regression analysis, in which the dependent variable was teacher efficacy perception, were examined. Accordingly, the Durbin–Watson value

(DW=1.91) and variance inflation factor (VIF=1.00) were determined, and regression analysis was continued according to the results obtained (Field, 2013). Thus, the necessary preconditions are met. The results of the simple linear regression analysis in Table 5 show that metalinguistic awareness explained 22% of the total variance in teachers' efficacy perception ($F_{(1, 306)}=89.5$, $p<.001$). The positive contribution of metalinguistic awareness to the regression model was significant ($\beta=.47$, $p<.001$).

4 Discussion

This study examined prospective Turkish teachers' metalinguistic awareness, Turkish teaching self-efficacy, and sense of efficacy. First, it was determined whether the gender and grade level of prospective Turkish teachers significantly differed in the scores obtained. Subsequently, the findings were reported by examining the relationships between specified situations.

According to the findings obtained in this study, prospective Turkish teachers' metalinguistic awareness and perceptions of teaching self-efficacy did not differ significantly according to gender. Ülper and Bağcı (2012) examined the self-efficacy perceptions of prospective Turkish teachers and found no significant gender differences. Maden and Ustabulut's (2022) study revealed that the self-efficacy of prospective Turkish teachers in preparing lesson plans did not differ by gender. Considering the results obtained, and especially the studies in which prospective Turkish teachers were examined, it is seen that the effect of gender on the perception of professional competence is not significant. Şeref and Varışoğlu (2020) found a significant difference in favor of female prospective teachers in metalinguistic awareness. It should be noted that prospective Turkish teachers were not selected as samples in that study. Thus, it can be considered as a possible situation in which the results do not match with this study. In addition, metalinguistic awareness, Turkish Teaching Self-Efficacy, and Teachers' Sense of Efficacy scores of 3rd and 4th grade students did not differ significantly between the groups. The fact that all the sampled students took more than half of the department courses may have been effective in this situation.

Phonological Awareness, Morphological Awareness, Semantic Awareness, Syntactic Awareness, Communicative Awareness, Cultural Awareness, which constitute the sub-factors of metalinguistic awareness, were presented as separate factors in the correlation analysis. Accordingly, a moderate correlational relationship was found between phonological awareness, morphological awareness, semantic awareness, syntactic awareness, communicative awareness, cultural awareness, Turkish teaching self-efficacy and teachers' sense of efficacy. A moderate positive correlation was also found between the metalinguistic awareness scale, Turkish teaching self-efficacy, and teachers' sense of efficacy. It was also found that metalinguistic awareness significantly predicted Turkish Teaching Self Efficacy and Teachers' Sense of Efficacy. Metalinguistic awareness explained 23% of the total variance in Turkish teaching self-efficacy. Metalinguistic awareness explained 22% of the total variance in teachers' sense of efficacy.

Teacher metalinguistic awareness is the knowledge that teachers have about the underlying systems of language that enable them to teach effectively (Thornbury, 1997). Tekşan and Kanık-Uysal (2018, p. 270) state that language awareness requires knowledge of the rules, subtleties, and wonders of language. It is stated that language awareness is a factor that significantly increases the success level of individuals in the process of learning and teaching a language (Şeref & Varışoğlu, 2020, p. 961). Adrews (2003) also emphasized the association between teachers' language awareness and pedagogical content knowledge. Tsang (2011, p. 1) states that systematic

micro-metalinguistic input be integrated in teacher training courses and be used more actively among in-service teachers in their teaching context. In this context, it can be said that metalinguistic awareness is a subject of L1 and L2 research. Batur and Beyret (2015, p. 889) reported that metalinguistic awareness skills had a positive effect on the L1 writing skills of secondary school students. The predictive effects of metalinguistic awareness skills and phonological awareness, working memory, and short-term memory on reading development in children, although there are some contradictory points, were stated (Sayar & Turan, 2012, p. 60). In a study conducted by Sönmez, Haznedar, and Babür (2017, p. 85), it was determined that the phonological awareness and vocabulary knowledge level of 3rd grade students predicted their success in writing qualified sentences. In a study conducted by Abdi and Zahedi (2014, p. 46) in the L2 context, metalinguistic awareness was found to affect prospective teachers' syntactic accuracy and syntactic complexity. In Spellerberg's (2016, p. 36) study that conducted in linguistically diverse school setting, "Metalinguistic Awareness test performance and school leaving exam results were found to be significantly correlated, indicating that metalinguistic abilities are linked to school performance in terms of school leaving exam results in several different subjects." Zerva (2023, p. 5) found that both teachers and learners who participated in a L1 written language teaching programme aimed at emphasising and using metalinguistic skills believed that metalinguistic skills contributed positively to learners' language performance, improved their ability to identify and correct errors, guided learners to a greater sense of security and satisfaction in the production of language products, and therefore teaching aimed at developing metalinguistic skills and applying metalinguistic strategies was preferred by learners. Njika (2015, p. 23) emphasizes the importance of teacher metalinguistic awareness of teaching and states that the attitudes of the teachers who participated in the study in the L2 context were positive, but their knowledge of metalinguistic awareness was weak. Wach (2013, p. 62) also reported that since language awareness is relatively low in foreign language teachers according to the results obtained in his study, it may be appropriate to diagnose the metalinguistic knowledge of teachers and prospective teachers more rigorously and to provide complementary training in this regard. Dempsey (2013, p. 75) concluded that there is a predictive relationship between writing quality and metalinguistic self-efficacy.

4.1 Limitations and future directions

This study must be evaluated by considering certain limitations. Although the participants voluntarily participated in the study, response errors should be considered. The fact that the participants may reflect on themselves in a different profile than they actually can also be considered a limitation. Within the scope of this study, data were collected from 308 3rd and 4th grade students. A sample research can be conducted on different study groups to generalize the results to the population.

The results suggest that prospective teachers' Turkish metalinguistic skills, pedagogical content knowledge, and practices should be examined in depth. In addition, since metalinguistics is important in terms of language teaching, it is recommended to give importance to these issues during the education of prospective language teachers.

4.2 Conclusion

This study found a positive correlation between metalinguistic awareness, Turkish teaching self-efficacy, and teachers' sense of efficacy. Metalinguistic awareness skills, which are considered

important in the literature, both in the context of language teacher training and for students to be successful in linguistic outcomes, appear to be an important skill type for prospective teachers. The results of the study show that metalinguistic awareness, which seems to be related to Turkish language teaching and general teaching self-efficacy, supports the outlook in the literature. As seen from the related literature, there is evidence that metalinguistic awareness is an important factor in the context of foreign language (L2) and native language (L1) teaching. Therefore, a comprehensive examination of language teaching and metalinguistics is necessary for thorough evaluation.

5 Statement of researchers

5.1 Researchers contribution rate statement

The authors have contributed equally to this study. Decisions were taken together at every stage of the research and the study was conducted.

5.2 Conflict statement

The authors declare no conflicts of interest.

5.3 Support and thanks

We thank the prospective teachers who participated in this study.

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