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An analysis of speech self-efficacy levels of pre-service special education teachers*

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Abstract

This study analyzed the speaking self-efficacy levels of pre-service special education teachers by various variants. Convenience sampling was used to choose the pre-service special education teachers (n=219) enrolled in Bolu Abant Izzet Baysal University's special education teacher preparation program. A single survey model was used in the design of this study. Data collection instrument was Speaking Self-Efficacy Scale. In summary, the speaking self-efficacy was high among participants. Although no significant difference was found between participants' speaking self-efficacy levels by gender, a significant difference was found between speaking self-efficacy levels by age, high school type and grade level. It has been noted that the speaking self-efficacy levels of those over 33 years of age, graduates of other high school types with no equivalent today, and those who attended the fourth grade were higher than the other groups. Accordingly, it was hypothesized that the level of speaking self-efficacy of prospective special education teachers would increase with age and grade level.

Keywords: Speaking self-efficacy, pre-service special education teachers, teacher training.

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INTRODUCTION

Individuals have to communicate with those around them in order to survive. There is no doubt that good communication is directly related to man's ability to use language. Speaking requires the use of several human-specific characteristics, including voice. Speaking, one of the productive skills consists of a complex set of activities, including using grammar and vocabulary, intonation, and clear pronunciation (Rizqiningsih & Hadi, 2019; Sundari & Dasmo, 2014). Speaking is a fundamental skill that enables learning, communication, and progress and occupies an essential place in individuals' lives. Speaking involves a complex process that requires a series of procedures, such as drafting opinions in mind, transferring them to the necessary organs, and translating them into words with the correct vocabulary, grammatical structure, and pronunciation by the context. This complex process requires the individual to operate cognitive and kinesthetic processes synchronously and competently in interaction (Yolcusoy & Çetinkaya, 2021).

Speaking, a key element of daily interaction, is one of the most evaluated areas of competence in real-life situations. Usually, a person's first feeling is based on fluent and understandable speaking skills (Rizqiningsih & Hadi, 2019). Through language, a person can perceive and define their environment and express their feelings and opinions to others. It is important for a person to use their speaking skills effectively while expressing their feelings and thoughts to others. This is especially important for teachers who frequently use speaking skills as a part of their job (Katrancı, 2014). A teacher's efficacious use of language is one of the critical qualities that a professionally competent teacher should possess (Baki, 2018).

Moreover, a teacher's ability to create an effective classroom communication environment depends on his or her effective language use in the classroom (Hayran, 2020; Karabulut, Özkubat & Uçar, 2021; Özkubat, Karabulut & Uçar, 2021). Speaking competencies have a strong impact on every aspect of life. Therefore, for a developed society, individuals should learn to speak accurately, and students should be trained to be good speakers (Öztürk-Pat & Yılmaz, 2021). For students to establish healthy relationships and become good speakers, their speaking skills must be maximized (Vatansever-Bayraktar, 2012). Therefore, it should not be forgotten that teachers are important actors in developing students' speaking skills.

Individuals' speaking competencies are linked to their beliefs, among many other factors (Aydın, 2013). Therefore, self-efficacy perception can be considered as an effective factor in speaking competence (Demirel, Başcı & Bektaş, 2020). Self-efficacy is the credence of a person's ability to fulfill a specific activity and is considered a strong performance determinant (Leeming, 2017). Self-efficacy, along with several affective characteristics such as motivation, anxiety and self-esteem, can influence a person's belief that they have and be capable of performing a particular task (Sundari & Dasmo, 2014). According to Albert Bandura, self-efficacy is characterized as an individual's control over potential threats to their activities. The threats that may affect a person's actions reflect the match between their perceived coping ability, i.e., their self-efficacy, and potentially adverse aspects of the environment. People who control the potential consequences of their actions do not develop anxiety and can engage in activities and actions without being affected by these threats. However, those who believe they cannot control the possible outcomes experience high anxiety levels during activities and actions. The main cause of anxiety about performing an activity is not the frightening cognitions per se, but the perceived self-efficacy of being able to perform that activity (Bandura, 1988).

Considering the concept of self-efficacy is about speaking skills, it is believed that pre-service teachers who have not learned rhetoric, i.e., the art of speaking and related skills, have low self-efficacy beliefs in relation to speaking skills and may subsequently suffer from speech anxiety (Hayran, 2020). Productive expression of feelings and thoughts is a key skill for one's career. Graduates are expected to give enough

importance to communication skills during vocational training. Self-efficacy beliefs are considered to be an influential factor in speaking competence and can affect various characteristics of speaking performance (Demirel et al., 2020). Pre-service teachers should develop their communication skills in case they face difficulties in their profession and equip themselves with the necessary skills for their future careers. Therefore, prospective teachers must have adequate language skills. In order to eliminate the communication barriers in prospective teachers' future careers, it is necessary to determine their level of speaking competence (Hayran, 2020).

Studies on university students from various disciplines' communicative and linguistic self-efficacy levels have been published in the literature (Cho, 2015; Kim, 2016; Roberts, Shan, Mali, Arquero, Joyve & Hassal, 2022; Yulikhah, Bukhori & Murtadho, 2019). Cho (2015) examined the relationship between 206 nursing students' communication skills and their self-efficacy levels and found a positive correlation between these two variables. Kim (2016) conducted a study with 274 nursing students in South Korea to examine the effects of self-efficacy, communication skills, and critical thinking tendencies on their clinical performance. Study results showed positive correlations between self-efficacy, communication skills, propensity for critical thinking, and clinical performance. Roberts et al. (2022) conducted a study identifying self-efficacy techniques to improve students' communication skills. One hundred thirty-one first-grade students in the United Kingdom participated in the research. As a result, the researchers identified "personal mastery" and "mental support" as two primary self-efficacy techniques for improving graduate communication skills. Yulikhah et al. (2019) studied self-efficacy's impact on students' communication in Indonesia (342 students). Although this study did not directly examine self-efficacy in speaking, it is noteworthy because it determined the contribution of students' self-efficacy beliefs and self-perceptions to their interpersonal communication, which is also related to the strength of speaking and self-expression. The research results showed that self-efficacy also assists students in communicating more effectively with others. Darmuki, Nurkamto & Saddhono (2017) examined the impact of the cooperative learning approach on university students and concluded that the students who were trained in speaking skills using the cooperative learning approach had better results than the control group.

Pre-service teachers were not adequately trained in speaking and communication skills during their professional training, so a variety of intervention programs were planned for pre-service teachers on these topics (Agustin, Pertamana & Rahmat, 2022; Hunt, Simonds & Cooper, 2002; Lapcharoen, 2021; McNaughton, Hamlin, McCarthy, Head-Reeves, & Schreineet, 2008). Agustin et al. (2022) conducted a descriptive case study with four pre-service teachers from the English Education Department in Indonesia to determine their self-efficacy in addressing students in their final year of higher education. The result shows that the students have an acceptable sense of self-efficacy before and during public speaking. Hunt et al. (2002) created a communication and public speaking training program for teachers and pre-service teachers. The program was based on learning by doing and consisted of three units: Communication Skills, Teaching Strategies, and the Impact of Communication. Lapcharoen's (2021) study, which examined prospective teachers' perceptions of 21stcentury competencies, compared the perceptions and competencies of 250 pre-service teachers from 13 different subject areas with varying academic achievement. The findings show that pre-service teachers are aware of the value of communication skills and important teaching, research, and evaluation skills. However, no relationship was found between pre-service teachers' perceived competencies and their academic performance. The findings highlight the importance of teacher education competencies for the 21stcentury by creating effective, high-quality programs that prepare pre-service teachers for successful career paths. McNaughton et al. (2008) examined the effectiveness of an intervention program designed to teach pre-service teachers effective listening skills, an important component of self-efficacy in speaking, to strengthen their communication with parents in a pretest-posttest control group study and found that the training improved pre-service teachers' effective listening skills. Following the training, pre-service teachers' parent communication was improved and more successful.

In the studies on speaking self-efficacy of pre-service teachers in Türkiye, it was seen that studies were conducted according to various variables (Demirel et al., 2020; Hayran, 2020; Kuru, 2018). Demirel et al. (2020) applied a study with 843 fourth-grade college students in Türkiye to determine their perception of speaking self-efficacy. Data were collected using the Speaking Self-Efficacy Scale (SSES). As a result, the participants showed a fairly high level of speaking self-efficacy. There was no significant difference between the participants' self-efficacy perceptions regarding gender. Hayran (2020) applied research with 499 pre-service teachers from various departments in Türkiye to investigate teacher candidates' speaking self-efficacy regarding some variables. Participants' self-efficacy perceptions by gender showed a significant difference in favor of females. Kuru (2018) applied research with 225 classroom teacher candidates in Türkiye to analyze the speaking self-efficacy levels of participants in terms of certain variables. Data were collected using SSES. As a result, male students were found to have higher levels of speaking self-efficacy in two dimensions. As the grade level increased, the level of speaking self-efficacy improved.

There are several other studies applied to determine oral communication skills of pre-service teachers (Dilekman, et al., 2008; Oğuz, 2009; Özerbaş, Bulut & Usta, 2007; Yelok & Sallabaş, 2009; Yılmaz & Çimen, 2008). Studies examining pre-service teachers' speaking self-efficacy levels were also identified (Akın, 2016; Alan, 2021; Baki, 2018; Hayran, 2020; Katrancı, 2014). However, no study examined pre-service special education teachers' speaking self-efficacy levels. As teachers who can communicate productively with their students are more successful, it is significant to determine teacher candidates' speaking self-efficacy levels (Özden, 2018). Since the speaking self-efficacy levels impact the future professional lives of pre-service special education teachers, the importance of the education provided at faculties of education should not be disregarded.

Some recent studies have revealed that self-efficacy and communication affect each other, and educational programs to enhance such skills are necessary for university students' professional development and preparation for professional life (Cho, 2015; Kim, 2016; Roberts et al. 2022). Speaking self-efficacy is considered as one of the main components of effective communication by several researchers (Demirel, et al., 2020; Hayran, 2020; Kuru, 2018). Special education teachers can work in many schools and institutions providing special education services at early childhood, primary and secondary levels. Special education teachers have to be in close cooperation with the main collaborators of special education, such as school leaders, other teachers, families and students, as well as other professionals involved in special education such as psychologists, psychiatrists, speech and language therapists, and physiotherapists (Ministry of National Education, 2018). In this respect, communication is a key skill and responsibility for special educators (Byrd & Alexender, 2020). However, the speaking self-efficacy beliefs of prospective special education teachers, who play a leading role in teaching language and communication skills to students with special needs and modeling these skills in speech, are extremely important. The quality of education students will acquire as undergraduate students will determine how well teachers can impart these skills to their pupils for use in the workplace. In this respect, determining the speaking self-efficacy of prospective special education teachers is also important for the needs analysis of a training program to be prepared on the subject.
For this reason, it is considered necessary to determine the speaking self-efficacy of prospective special education teachers. Based on this idea, the general purpose of this study is to examine the speaking self-efficacy levels of prospective special education teachers. The sub-objectives are as follows:

1. What is the speaking self-efficacy level of participants?
2. Are there differences in speaking self-efficacy levels of pre-service special education teachers by age, gender, high school and grade?

METHOD

Research Design

Single survey design was used as a method. Single survey models are research designs used to identify the occurrence of variables singly about kind or number. The event, element, individual, unit, scenario, etc. variables are specified independently in single survey models (Karasar, 2002). Considering that the outcomes for each variable were presented separately and the participants' scores on speaking self-efficacy were examined using different factors, it can be contended that the study aligns well with the functioning of a single survey model.

Population and Sample

The research involved university students in special education teacher preparation programs throughout Turkey. The convenience sampling technique was used to select the sample, which included 219 university students enrolled in the special education teacher preparation program at Bolu Abant İzzet Baysal University. Convenience sampling, also known as incidental sampling, in which the research target group satisfies requirements such as ease of accessibility, availability at a specific time, or voluntariness (Etikan, Musa & Alkassim, 2016). Table 1 contains the participant profiles.

Table 1. The Participants' Profile

		N	%
Age	18-22	130	59,4
	23-27	58	26,5
	28-32	24	11
	33 and above	7	3,2
Gender	F	137	62,6
	M	82	37,4
Graduated High School	Anatolian High School (AHS)	137	62,6
	Anatolian Imam Hatip High School (AIHHS)	23	10,5
	Science High School (SHS)	1	0,5
	Social Sciences High School (SSHS)	13	5,9
	Vocational and Technical Anatolian High School (VTAHS)	25	11,4
	Other	20	9,1
Grade	Grade-1	43	19,6
	Grade-2	66	30,1
	Grade-3	39	17,8
	Grade-4	71	32,4

Table 1 shows that of the participants, 130 (59.4%) were between the ages of 18 and 22; 58 (26.5%) were between the ages of 23 and 27; 24 (11%) were between the ages of 28 and 32; and 7 (3.2%) were 33 years or older. Among the participants, 82 men (37.4%) and 137 women (62.6%) were the participants. As for the type of high school, 137 were AHS graduates (62.6%), 23 were AIHHS graduates (10.5%), 1 was SHS graduate (0.5%), 13 were SSHS graduates (5.9%), 25 were VTAHS graduates (11.4%) and 20 were graduates of other types of high schools that include the schools that existed in the past but have no equivalent today, such as regular high schools and super high schools (9.1%). Following is a breakdown of the participants' grade level distribution: 43 (19.6%), 66 (30.1%), 30 (17.8%), and 71 (32.4%).

Data Collection Tools

In this study, two different data collection tools, the Demographic Information Form and the Speaking Self-Efficacy Scale, were used. *Demographic Information Form:* This includes inquiries on the age, gender, high school type, and grade level of potential special education teachers. *Speaking Self-Efficacy Scale*

(SSES): The scale evaluates the speaking self-efficacy level of pre-service teachers (Aydın, 2013). The scale development study was applied to 503 university students from various departments, 296 females and 207 males. A scale form with 46 items and 4 dimensions was created by factor analysis. The dimensions of the scale were named as "Speech Planning", "Speaking Process", "Linguistic Structure" and "Listener Factor". The speech Planning dimension includes 20 items and covers the processes related to the psychological preparation of the individual before speaking. Speaking Process includes 12 items and The Speech Process factor includes processes related to organizing speech content. Linguistic Structure dimension includes nine items and covers the formal speech processes such as language, structure and pronunciation. Listener Factor includes five items and covers processes related to respecting the listeners and following courtesy rules during the conversation. The fit index values were found to be at an excellent level. The scale's lowest and highest scores are 46 and 230, respectively.

Data Collection

Data collection was carried out using the Google Forms program. Participants in mobile sharing groups were given data collecting tools, which were set up as an online survey form, and requested to fill them out following their grade levels.

Data Analysis

The Kolmogorov-Smirnov Test (K-S Test) was used to determine the normality of the scale scores and the tests to determine the participants' speaking self-efficacy levels. Table 2 presents the outcomes.

Table 2. K-S Test

Scale	Kolmogorov-Smirnov Z	Kurtosis	Skewness	*p*
SSES	,082	,908	-,805	,001

As shown in Table 2, the data distribution ($p<.05$) is not normal. Therefore, non-parametric tests were preferred. Statistical significance level .05 was accepted.

Ethical Considerations

This research was ethically approved by Bolu Abant İzzet Baysal University Social Sciences Human Research Ethics Committee with the decision numbered 2022/06 on 27.05.2022 (Protocol No: 2022/214).

FINDINGS

The results that were produced in accordance with the sub-objectives are shown below.

The Speaking Self-Efficacy Levels of Pre-Service Special Education Teachers

Table 3 displays the mean and standard deviations of the individuals' scale scores.

Table 3. Mean and Standard Deviation of SSES Scores

	$\bar{x}$	S
Speech Planning	76,25	16,39
Speaking Process	49,28	7,42
Linguistic Structure	35,88	6,52
Listener Factor	21,99	2,87
Total	183,39	30,21

The average score obtained by the pre-service special education teachers from the SSES is 183.39. Considering that the minimum and maximum scores of the scales are 46 and 230, the scores are above average. The average score in the Speech Planning factor is 76.25. Considering that the lowest and highest scores of this dimension are 20 and 100, respectively, the speaking self-efficacy levels of

participants in Speech Planning are above the average score of this dimension. The participants' mean score in the Speaking Process dimension is 49.28, indicating that their speaking self-efficacy levels are above the dimension's average score, given the range of scores from 12 to 60. The average score of the participants in the Linguistic Structure dimension is 35.88. With scores ranging from 9 to 45, participants' speaking self-efficacy in the Linguistic Structure dimension surpasses its average. Participants in the Listener Factor dimension have an average score of 21.99, and with scores ranging from 5 to 25, their speaking self-efficacy levels in this dimension exceed the average. Taking notice of these findings, it was discovered that participants' speaking self-efficacy levels were typically greater than the mean score.

Pre-Service Special Education Teachers' Speaking Self-Efficacy Levels by Age, Gender, High School Type and Grade

SSES Scores by Gender

The participants' scale scores according to gender are shown below.

Table 4. Mann-Whitney U Test Calculations of SSES Scores by Gender

	Gender	N	Mean Rank	Rank Sum	U	*p*
Speech Planning	F	137	103,79	14219,50	4766,50	,061
	M	82	120,37	9870,50		
Speaking Process	F	137	111,40	15261,50	5425,50	,673
	M	82	107,66	8828,50		
Linguistic Structure	F	137	110,50	15138,00	5549,00	,881
	M	82	109,17	8952,00		
Listener Factor	F	137	109,42	14991,00	5538,00	,860
	M	82	110,96	9099,00		
Total	F	137	107,17	14682,00	5229,00	,392
	M	82	114,73	9408,99		

Based on Table 4, no significant difference is seen (p>.05) between the SSES scores by gender in Speech Planning (U=4766.50), Speaking Process (U=5425.50), Linguistic Structure (U=5549) and Listener Factor (U=5538) dimensions as well as in the overall scale (U=5229).

SSES Scores by Age

Table 5 displays the Kruskal Wallis H (K-W H) test result for the participants' scores by age.

Table 5. K-W H Test Calculations of SSES Scores of Participants by Age

	Age Range	N	Mean Rank	Df	χ2	*P*
Speech Planning	18-22	130	98,37	3	21,92	,000
	23-27	58	114,13			
	28-32	24	138,40			
	33 and above	7	194,50			
Speaking Process	18-22	130	95,65	3	22,31	,000
	23-27	58	123,97			
	28-32	24	132,04			
	33 and above	7	185,21			
Linguistic Structure	18-22	130	99,30	3	13,89	,003
	23-27	58	121,40			
	28-32	24	121,25			
	33 and above	7	175,64			
Listener Factor	18-22	130	93,52	3	29,35	,000
	23-27	58	122,60			
	28-32	24	148,08			

	33 and above	7	181,21			
Total	18-22	130	96,56	3	23,41	,000
	23-27	58	119,44			
	28-32	24	135,05			
	33 and above	7	194,43			

According to Table 5, significant difference has been noticed between the ages of the participants and the overall scale (χ^2 =23.41, p<0.05), Speech Planning dimension (χ^2=21.92, p<0.05), Speaking Process dimension (χ^2=22, 31, p<0.05), Linguistic Structure dimension (χ^2=13.89, p<0.05) and Listener Factor dimension (χ^2 =29.35, p<0.05).

When the mean rank scores are considered, those aged 33 and above received the highest score in the dimensions of Speech Planning, Speaking Process and Listener Factor and in overall scale, followed by those aged 28-32, 23-27 and 18-22, respectively. As for the Linguistic Structure dimension, it is seen that those aged 33 and above received the highest speaking self-efficacy score, followed by those aged 23-27, 28-32 and 18-22, in that order.

The formula [(η^2= χ^2/(N-1)], which is recommended for K-W H Test, was employed for the effect size analysis (Green & Salkind, 2005; cited in Can, 2017, p. 161). Accordingly, effect sizes were found as 0.10 for Speech Planning and Speaking Process dimensions, 0.06 for Linguistic Structure dimension, 0.13 for Listener Factor dimension, and 0.11 for the overall scale. According to the effect size ranges suggested by Cohen, η^2 indicates a small effect at 0.01, a medium effect at 0.06, and a large effect at 0.14 (Ellis, 2010; Özçomak & Çebi, 2017). Therefore, participants' speaking self-efficacy levels for the Speech Planning, Speaking Process, Linguistic Structure aspects, and overall scale are moderately influenced by their age.

SSES Scores by the Type of High School Graduated

The K-W H test results of the scale scores according to the type of high school are presented in Table 6.

Table 6. K-W H Test Calculations of SSES Scores by High School Type

	High School	**N**	**Mean Rank**	**Df**	**χ2**	***p***
Speech Planning	AHS	137	107,23	5	13,73	,017
	AIHHS	23	90,07			
	SHS	1	5,00			
	SSHS	13	136,27			
	VTAHS	25	106,04			
	Other	20	145,00			
Speaking Process	AHS	137	105,23	5	8,07	,152
	AIHHS	23	104,98			
	SHS	1	1,00			
	SSHS	13	138,00			
	VTAHS	25	124,86			
	Other	20	117,15			
Linguistic Structure	AHS	137	108,21	5	8,46	,133
	AIHHS	23	103,09			
	SHS	1	7,50			
	SSHS	13	133,23			
	VTAHS	25	98,86			
	Other	20	134,18			
Listener Factor	AHS	137	105,89	5	5,64	,343
	AIHHS	23	111,91			
	SHS	1	2,50			
	SSHS	13	123,65			

	VTAHS	25	115,38			
	Other	20	125,75			
Total	AHS	137	106,40	5	10,76	,056
	AIHHS	23	96,13			
	SHS	1	3,00			
	SSHS	13	137,58			
	VTAHS	25	110,06			
	Other	20	137,98			

There is a significant difference in speech planning dimension regarding the type of high school students graduated (χ^2=13.73, p<0.05). Regarding the type of high school, no further significant differences were found. Furthermore, when the mean rank scores of the groups are considered, it is found that those with the highest levels of speaking self-efficacy in the Speech Planning dimension are graduates of other types of high schools that, including the schools that existed in the past but have no equivalent today, such as regular high schools and super high schools. Graduates from other types of high schools are followed by SSHS, AHS, VTAHS, AIHHS and SHS graduates.

In the effect size analysis, the effect size was found as [(η^2= χ^2/(N-1) =13,73/218] =0,06 for the Speech Planning dimension. Accordingly, the high school graduate type moderately impacts Speech Planning self-efficacy.

SSES Scores by Grade Level

The K-W H results of the scale scores by grade level are presented below.

Table 7. K-W H Test by Grade Level

	Grade Level	**N**	**Mean Rank**	**Sd**	**χ2**	***p***
Speech Planning	1	43	88,61	3	10,19	,017
	2	66	105,33			
	3	39	111,14			
	4	71	126,67			
Speaking Process	1	43	82,34	3	17,26	,001
	2	66	107,87			
	3	39	103,97			
	4	71	132,04			
Linguistic Structure	1	43	96,44	3	4,24	,236
	2	66	105,73			
	3	39	113,64			
	4	71	120,18			
Listener Factor	1	43	96,49	3	7,58	,056
	2	66	100,18			
	3	39	115,87			
	4	71	124,08			
Total	1	43	88,07	3	11,15	,011
	2	66	105,15			
	3	39	109,97			
	4	71	127,80			

The parameters of Linguistic Structure (χ^2=4,24, p>0,05) and Listener Factor (χ^2 =7,58, p>0,05) showed no discernible change by grade level. However, significant difference was observed in Speech Planning (χ^2=10,10, p<0,05) and Speaking Process (χ^2=11,15, p<0,05) dimensions and the overall scale (χ^2 =10,10, p<0,05). The 4th graders have the highest levels of self-efficacy in the Speech Planning and in the overall scale, followed by 3rd, 2nd, and 1st graders, in that order. In the Speaking Process dimension, it was

observed that the 4th graders had the highest level of speaking self-efficacy, followed by 2nd, 3rd and 1st graders, in that order.

In terms of effect size analysis, the effect size was found as [(η^2= χ^2/(N-1) =10,19/218] =0,05 for the Speaking Planning dimension, [(η^2= χ^2/(N-1) =17,26/218] =0,08 for the Speaking Process dimension, and [(η^2= χ^2/(N-1) =11,15/218] =0,05 for the overall scale. Accordingly, grade level has a negligible effect on the speaking self-efficacy levels of participants in the Speaking Process dimension and the broad scale, and a moderate impact in the Speaking Process dimension.

DISCUSSION AND CONCLUSION

The conclusions of this study, which examined pre-service special education teacher' speaking self-efficacy levels by selected variables, show that the participants' speaking self-efficacy are generally high. Previous studies have contradictory results, though. For example, in their studies Alan (2021), Ürün-Karahan (2015) and Katrancı (2014) found high speaking self-efficacy perceptions among teachers and students. Yet, Oğuz (2009) revealed lower levels. Speaking is one of the key skills that teachers intensely utilize throughout their professional lives. Alan (2021) stated in his study that speaking self-efficacy levels of pre-service teachers play a critical role in making them productive in their professional lives in the future. Based on the results of his research, Kim (2016) stated that self-efficacy and communication skills are directly related concepts and are very important for university students in developing interpersonal relationships and preparing for their future professions.

However, when the research on the oral and written abilities of future teachers and other university students in the worldwide literature is evaluated, it is observed that teacher education programs are inadequate in developing pre-service teachers' communication skills and additional training programs are needed (Agustin et al., 2022; Darmuki et al., 2017; Hunt et al., 2002; Lapcharoen, 2021; McNaughton et al., 2008). Darmuki et al. (2017) found that students who received speaking skill training using the cooperative learning approach outperformed the control group in their study examining the impact of the collaborative learning approach used with university students on students' speaking skills. Based on the notion that pre-service teachers did not get adequate speaking training during their professional training, Hunt et al. (2002) created a communication and speaking training program for teachers and pre-service teachers. Three units made up the program, which was founded on learning by doing and included communication skills, teaching tactics, and the effects of communication. McNaughton et al. (2008) found that the training improved pre-service teachers' effective listening skills in a pretest-posttest control group study in which they examined the efficacy of an intervention program aimed at providing pre-service teachers with effective listening skills, which are a crucial part of speaking self-efficacy and thus to strengthen their communication with parents. Following the training, pre-service teachers' parent communication was improved. In addition, individuals who rarely or never read have difficulty in understanding and defining their feelings and ideas because their vocabulary is insufficient for their age and they have a limited living setting (Hayran, 2020). Inadequate vocabulary affects the perceptions of teacher candidates' speaking self-efficacy (Hayran, 2020; Oğuz, 2009). Because communication skills are an important part of the teaching profession, speaking training in pre-service teachers' education programs should always be perceived as an urgent need.

No significant difference has been found among pre-service special education teachers' speaking self-efficacy levels by gender. This result coincides with some research results (Akın, 2016; Baki, 2018; Demirel et al., 2020; Dilekman et al., 2008; Yılmaz & Çimen, 2008) which show that gender does not have any impact over the prospective teachers' speaking self-efficacy levels. However, Hayran (2020), Katrancı (2014), Kılcıgil et al. (2009), Owen and Bugay (2014), Özerbaş et al. (2007), Tekşan and Çinpolat (2018) argued that self-efficacy levels diverged in favor of females. On the contrary, Kuru (2018) found in his study that male students were had higher levels of speaking self-efficacy in two dimensions. When the

results are considered together, it can be said that it is difficult to reach a generalization about the effect of gender on speaking skills.

The participants aged 33 and over have the highest scores in the dimensions of Speech Planning, Speaking Process and Listener Factor and in the overall scale, followed by those aged 28-32, 23-27 and 18-22, in that order. In the Linguistic Structure dimension, it is seen that those aged 33 and above have the highest speaking self-efficacy, followed by those aged 23-27, 28-32 and 18-22, in that order. Accordingly, the pre-service special education teachers aged 33 and above have the highest speaking self-efficacy. As a result of effect size analysis, age was found to have a medium-sized effect on the speaking self-efficacy levels of the participants. Also, a notable variation has been observed in the Speech Planning dimension based on the type of high school graduated, while no variation was noted in the other three dimensions and the overall scale. When the mean rank scores of the groups are considered, the participants with the highest scores in the dimension of Speech Planning graduated from other types of high schools that do not exist today. According to the effect size analysis, the high school graduated moderately affected the participants' speaking self-efficacy levels in Speech Planning dimension. The high schools listed in the options given in the Demographic Information Form, except for the other types of high schools, are those currently operating in Turkey. "Other" type of high schools include the schools that existed in the past but have no equivalent today, such as regular high schools and super high schools. Pre-service teachers who graduated from these types of high schools were considerably older than other pre-service teachers and generally decided to study at university for the second time, or for the first time following a long break after graduation from high school. It is believed that the characteristics of these teacher candidates that create a significant difference in the Speech Planning dimension may be that they have more life experience than other pre-service teachers rather than the type of high school graduate. In the Speech Planning dimension, those of Social Sciences High Schools follow the graduates of other types of high schools. The fact that this group's high school education program consists of courses with verbal content may affect their speaking self-efficacy in the Speech Planning dimension. These findings of the study, which show that age and the type of high school graduated from are effective on speaking self-efficacy, reveal that speaking self-efficacy is related to experience. Research show the intervention programs that improve the speaking skills of pre-service teachers and other university students, learning by doing and experiencing model is preferred and evaluations are made through the practical demonstration of pre-service teachers' speaking and communication skills (Agustin et al., 2022; Darmuki et al., 2017; Hunt et al., 2002; McNaughton et al., 2008). The research findings in literature highlight the significance of teacher education programs in fostering the development of speech and communication skills by designing effective, high-quality curricula that will better equip aspiring educators for rewarding careers (Hunt et al., 2002; Lapcharoen, 2021). This finding of the study points to a similar result with the studies in the literature. In addition, it points to the importance of including speaking trainings in the content of teacher education programs for more prospective teachers to develop speaking and communication skills at an earlier age and to have a higher perception of speaking self-efficacy.

When pre-service special education teachers' speaking self-efficacy levels are examined by grade level, no significant difference in Linguistic Structure and Listener Factor dimensions, whereas a significant difference was identified in Speech Planning and Speaking Process dimensions and the overall scale. In the Speaking Planning dimension and in the overall scale, the 4th graders have the highest level of speaking self-efficacy, followed by the 3rd, 2nd and 1st graders, respectively. In the speaking process dimension, it was observed that the 4th graders had the highest level of speaking self-efficacy, followed by the 2nd, 3rd and 1st graders, in that order. This result is in line with other research findings. Alan (2021), Katrancı (2014), Kuru (2018) and Oğuz (2009) examined the perceptions of pre-service teachers regarding verbal expression and speaking self-efficacy by grade level and found a significant difference for the 4th graders. Considering the findings, participants' speaking self-efficacy levels increase by grade level with the help of the education received. According to the effect size analysis, participants' speaking self-efficacy levels in both the Speaking Process dimension and the overall scale were affected by grade

level to a minor and moderate extent, respectively. Other studies concluded that the students' grade level did not create a significant difference (Dilekman et al., 2008; Pehlivan, 2005; Yılmaz & Çimen, 2008). Special education pre-service teachers should be provided with learning environments where they can interact to improve their speaking skills and communicate effectively from the first grade. For this purpose, it can be recommended to include different teaching methods and techniques in undergraduate courses and to create content for practice-oriented and student-centered approaches. For implementation, it is recommended to develop training programs to improve pre-service teachers 'speaking self-efficacy. In this study, age was found to be a factor affecting speaking self-efficacy. Accordingly, it is recommended that special education pre-service teachers should be given training on speaking self-efficacy from the first year of the university. For further research, studies with different types of methods can be conducted to determine the speaking self-efficacy beliefs of university students. The study was applied with special education pre-service teachers studying in Special Education. Longitudinal studies can make comparisons. Replication studies can be applied in different universities, faculties and departments.

Statement of Researchers

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