

# What does peer coaching research in Türkiye say? A content analysis study

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## Abstract

This study aims to determine the trends of the research on peer coaching in Türkiye and to perform a meta-synthesis of the research results. Descriptive content analysis and meta-synthesis methods were used in the study. To collect data, a research review form on peer coaching prepared by the researcher was used. The research data were analyzed using the categorical analysis technique, one of the types of content analysis. To collect data, a research review form on peer coaching prepared by the researcher was used. The research data were analyzed using the categorical analysis technique, one of the types of content analysis. According to the findings of the research, the aims of determining the effects of coaching skills on teacher competencies, teaching, and student achievement, and determining the relationship between coaching skills and different variables were emphasized in the studies. The most used keywords in the studies were coaching, coach, peer coaching, leadership, teacher, professional development, and teacher education. According to the subject areas, research is mostly concentrated on coaching skills and coaching practices. It was determined that the research in which teachers at all levels participated, quantitative-based, quantitative data collection tools, and many data analysis methods were intensely used. According to the results of the research, it was determined that there are many research results that colleague coaching improves teachers' professional skills. Moreover, it was determined that teachers' coaching skills differed according to the variables addressed in the studies. In addition, it was concluded that coaching skills are related to many variables. In line with the results of the research, it is recommended to conduct experimental studies to determine the effect of coaching skills on student achievement at primary and secondary school level. In addition, considering the limited research on coaching roles and coaching competencies, it is recommended that new research be conducted on these issues.

**Keywords:** Coaching, Peer coaching, Professional development, Content analysis, Meta synthesis.

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## INTRODUCTION

Rapid changes and developments in every field force educational institutions to be the subject of change and development along with all other institutions. Teachers, who have the power to directly affect education systems, are expected to assume new roles related to their professional knowledge, skills and competencies in this context. Teachers can have competencies related to the new roles they are expected to assume in education by participating in qualified professional development activities (Guskey, 2000).

Professional development is a systematic and planned activity to improve knowledge and skills (Nguyen, 2019). Professional development aims to provide up-to-date knowledge and skills related to the field of study (Reese, 2010). Teacher professional development is the professional learning experiences and opportunities provided through planned, external support or in-work activities to increase teachers' knowledge to improve students' learning outcomes (Darling-Hammond et al., 2017; Opfer & Pedder, 2011). Effective professional development activities encompass a long process of teacher-centered, teacher-centered opportunities and experiences in which teachers are responsible for students' effective learning and take the lead in effective teaching (Darling Hammond & McLaughlin, 2011; Youngs & Lane, 2014). Effective professional development activities contribute not only to student learning but also to the professional development of colleagues and the development of the school's learning culture (Guskey, 2003; Hauge & Wan, 2019; Postholm, 2012). The effectiveness of professional development activities is directly related to the teacher's ability to master professional skills, thus performing teaching effectively and contributing positively to students' learning outcomes.

The main characteristics found in the research as the characteristics of effective professional development activities; i) include teaching activities that involve the active participation of the teacher and the teacher's practice, ii) respond to the professional development needs of teachers, iii) enrich teachers' professional knowledge and experience, iv) improve students' learning outcomes, v) being school and research-based, vi) to develop cooperation and support mechanisms between stakeholders in the school, vii) being specific to the field, viii) providing feedback, reflection, and being sustainable, ix) being appropriate in terms of teaching time and duration, x) including examples of effective practice, xi) professional development activities are carried out by expert trainers (Avalos, 2011; Darling-Hammond et al., 2017; Desimone, 2009; Desimone & Garet, 2015; Hunzicker, 2011; Patton, Parker & Tannehill, 2015; Zepeda, 2017). For effective professional development activities to achieve their purpose, they should be spread over the whole school term, enrich the sharing and interaction between teachers throughout the school term, and create a productive learning atmosphere (Bayar, 2014; Desimone & Pak, 2017; Sims & Fletcher-Wood, 2021).

In the Teaching and Learning International Study (TALIS), effective professional development activities for teachers include school visits, participating in inter-teacher sharing and communication networks, mentoring and peer observation, following and reading professional publications, collaboration with colleagues, conducting research and participating in research groups, attending courses, seminars, conferences and workshops for professional development (Schleicher, 2018). In addition to these, professional development tools such as mentoring, peer teaching, lesson research, lesson study, action research, Shanghai research and lesson groups, and peer coaching are used to ensure professional development (Desimone & Pak, 2017; Dunst et al., 2015; Hooker, 2013; Ilgan, 2021). Since many variables directly affect students' learning and teachers' professional skills, utilizing different professional development models and activities can make professional development purposeful and more functional (Borko et al., 2010; Desimone & Garet, 2015). Peer coaching is one of the most utilized professional development activities today as a professional development tool (Athanasopoulou & Dopson, 2018; Desimone & Pak, 2017).

Peer coaching is a professional development practice in which at least two or more teachers from the same branch, with close professional seniority and competencies, fulfill the coaching role of the participants in turn and give feedback to each other (Joyce & Calhoun, 2019). In peer coaching, teachers who take the coaching role in turn engage in peer interaction and cooperation through pre-instructional planning, lesson observation, observation results, and post-instructional experience sharing (Vidmar, 2005; Zepeda et al., 2013). In addition to providing teachers with new knowledge and experiences from their peers, peer coaching practices provide rich opportunities for teachers to contribute to their professional development and their students' learning (Keiler, 2018; Rhodes & Beneicke, 2002; Zepeda, 2017).

There are four main functions in peer coaching practices: supporting each other, providing technical support for teaching and feedback on performance, evaluating teaching practices, and aligning teaching outcomes with student learning (Hagen et al., 2017; Snyder et al., 2015). In the coaching practice, firstly, a preliminary interview is conducted for the professional skills of the teacher to be developed. After the preliminary interview, in-class observations are made by using data collection techniques related to the professional behavior or skill to be

developed. At the end of the observation, a sharing meeting is held regarding the data collected (Ilgan, 2021; Showers & Joyce, 1996, Lu, 2010). The process is carried on with cooperation and trust. In the post-observation sharing meeting, the coach expresses his/her observations constructively, and the cooperation for the realization of new goals is continued (Anderson et al., 2005; Keiler et al., 2020).

As a powerful professional learning tool for teachers, coaching provides teachers with the opportunity to work and learn together (Devine et al., 2013; Hsieh et al., 2021). Coaching provides cooperation and interaction between teachers, especially for teachers who are new to the profession and experiencing professional stress (Peterson et al., 2010; Soisangwarn & Wongwanich, 2014). Peer coaching provides effective professional development for teachers in many ways such as improving classroom teaching practices, improving colleague collaboration, providing teachers with learning opportunities based on their own experiences, and providing teachers with effective classroom management skills (Bruns et al., 2018; Kraft et al., 2018; Lu, 2010). Effective coaching practices prevent teachers from experiencing professional isolation and increase their job satisfaction and motivation to teach as a result of effective communication and cooperation among peers (Othman & Yee, 2015; Skaalvik & Skaalvik, 2010; Walsh et al., 2020). However, there are also problems such as poor planning of the peer coaching process, poor professional skills of the coaching teacher, lack of effective and timely feedback, increased workload of teachers, and competition among teachers (Erdem & Ilgan, 2011; Jao, 2013; Kurtts & Levin, 2000; Lu, 2010; Sider, 2019). For the effective implementation of coaching practices, systematic training can be provided to improve teachers' coaching skills. Coaching practices can be more effective by setting common goals between teachers in the perspective of improving student learning, providing effective guidance on providing effective feedback on teaching observation, and developing mutual trust and cooperation processes between teachers (Fry & Hin, 2006)

The results of the research reveal that teachers benefit from the guidance of experienced teachers in a master-apprentice relationship based on colleague interaction to provide professional development (Kohler et al., 1997; Kraft et al., 2018; Ross, 1992; Van Nieuwerburgh, 2018; Yang et al., 2022). In Türkiye, the professional development activities that teachers benefit from the most are in-service training courses, meetings, and vocational training seminars (Can, 2019). It was determined that in-service courses were inadequate in terms of content and did not meet the expectations of teachers in terms of providing professional development (Başturk, 2012; Bumen et al., 2012; Ceylan & Gundoğdu, 2017; Eroglu & Ozbek, 2020; Sicak & Parmaksiz, 2016). In Türkiye, 86 percent of teachers mostly participate in in-service training for professional development, while only 21 percent of teachers participate in training based on coaching practices (OECD, 2019). It can be said that colleague coaching is a professional development tool that teachers have benefited from and are interested in after the 2000s in Türkiye, especially with the increase in research on colleague coaching.

To provide data for this study, a literature review revealed that the first study on peer coaching in Türkiye was conducted in 2007, and the number of studies has increased in recent years. Systematically analyzing the studies conducted in Türkiye on colleague coaching and revealing the issues and results that constitute the focus of the studies are likely to make significant contributions to the effective implementation of colleague coaching, to the literature, to the professional development of teachers, and to researchers on professional development. In addition, the trends of the research on peer coaching (articles and theses), its reflections on the professional development of teachers, the description of the current situation, and the fact that the findings to be obtained will be an important source for new research make the research very important. In this context, the findings obtained in the study may be instructive for teachers, teacher training institutions, educational policymakers, professional development experts, and researchers on professional development. When the literature was analyzed, no comprehensive study was found that reflected the trends and results of the studies conducted in Türkiye on peer coaching. This study, it was aimed to determine the research trends by using content analysis of articles and theses on peer coaching in Türkiye and to analyze the research results by meta-analysis. In line with this main match, answers to the following questions were sought. In the peer coaching studies carried out in Türkiye;

1. For which purposes were the research carried out?
2. What were the keywords used in the research?
3. What were the prominent topics in the research?
4. What were the educational levels at which the research was conducted?
5. What was the distribution of the methods used in the studies?
6. Which participant/sample groups were preferred in the studies?
7. What were the data collection tools used in the studies?
8. What were the data analysis methods used in the studies?
9. What were the prominent results of the studies?

## METHOD

### Research Design

In this study, descriptive content analysis and meta-synthesis methods were used (Karasar, 2016; Neuendorf, 2002). Descriptive content analysis, aims to determine research trends in the light of the headings determined about a subject and to describe the current situation (Cohen et al., 2007). Meta-synthesis is the reinterpretation of qualitative findings in selected studies based on certain criteria on a topic by comparing and combining them (Nye et al., 2016; Leary & Walker, 2018; Walsh & Downe, 2005). In this study, descriptive content analysis was used to systematically examine the articles and postgraduate theses on peer coaching in Türkiye and to reveal research trends, and the meta-synthesis method was used to interpret the research results.

### Data Source of the Research and Inclusion Criteria

The data source of the research consisted of master's and doctoral theses and articles on peer coaching indexed in TÜBİTAK ULAKBİM DergiPark, Google Scholar, and EBSCOhost databases. The keywords "peer coaching", "coaching" and "teacher coaching" were used in the selection of the studies subject to the research. In the survey conducted with keywords, 52 studies, including 41 postgraduate thesis studies and 11 articles, were reached. Criterion sampling method was used to determine the studies to be included in the study. Criterion sampling is the selection of situations, cases, participants, groups, etc. suitable for the research (Patton, 2014). These criteria can be created by the researcher in line with the purpose of the research or ready-made criteria suitable for the research can be used (Marshall & Rossman, 2014). In the creation of the data source of the research, the following criteria were taken into consideration: the studies were conducted by Turkish researchers, the study samples were in Türkiye, the studies were published between the year 2000 and October 2023, the studies contained the specified Turkish and English keywords, the articles were published in national/international refereed journals, and the articles and postgraduate theses were open access. Articles and graduate theses without open access were not included in the study. In studies published as articles and postgraduate theses on the same topic, only articles were taken as data sources to avoid duplication in the data set. The data source of the study consisted of a total of 41 studies, including 6 articles and 35 graduate theses that met these criteria.

### Data Collection and Coding Process

To collect data for the study, the researcher used a form prepared by the researcher to review research on peer coaching. The form was prepared to respond to the sub-objectives of the research. The form included the following subtitles, type of research, publication date, keywords, purpose, educational level where the research was conducted, subject of the research, research method and type, sample group, data collection tools, analysis methods, and research results. Each research was coded according to the subheadings specified in the review form and information about the study was entered into the form. Each research examined within the scope of the article was coded as Research 1, Research 2... Research 41 (R1, R2...R41) and these codes were used in the research.

### Data Analysis

The research data were analyzed using the categorical analysis technique, one of the types of content analysis. The categorical analysis technique is the division of the examined event, phenomenon, message, situation or subject into sub-units, analyzing and grouping each unit according to the determined categories (Schreier, 2014). In determining the categories, the sub-headings specified in the sub-objectives of the research were taken as basis. Each study was coded according to the titles organized according to the sub-objectives of the research in the Microsoft Excel file. As a result of the coding, a raw table that constitutes the data set of the research was obtained. Based on the raw table, the findings related to each theme were presented as a table.

### Validity and Reliability

For the validity of the study, all studies related to peer coaching that met the specified criteria were accessed. The data collection and analysis processes were explained in detail, and a research review form was used to fully examine the studies based on the specified criteria, and the information about each study was noted in the table created in detail. To ensure the reliability of the research, criterion sampling, one of the purposeful sampling methods was used in the selection of the studies following the tradition of qualitative research. The studies were described and coded in detail according to the determined categories. While coding, the raw data were kept faithful. For this purpose, each study was coded according to the determined categories, and a coding table was created including all studies. In qualitative research, the inter-coder consensus is expected to be at least 80% (Miles & Huberman, 2015). To ensure the reliability of the coding, the same studies were analyzed and coded again by the researcher three weeks later, and the agreement between the codings was determined as 99%. This value indicates a very high level of agreement and is an acceptable value for the research (Miles & Huberman, 2015).

## RESULTS

The findings obtained in the research are presented under headings in line with the sub-objectives of the research.

### Aims of the Peer Coaching Research

The aims of peer coaching research were examined and analyzed in detail. Table 1 presents the aims of the peer coaching research.

**Table 1.** Aims of Peer Coaching Research

Aims of the research	Related Research	Frequency (f)
Determination of coaching behaviors/roles/skills of administrators, teachers, and supervisors	R1, R2, R4, R7, R13, R18, R21, R23	8
Effects of coaching skills on teacher competencies, teaching practices, and students	R5, R6, R8, R9, R10, R15, R17, R19, R26, R30, R35, R36, R37, R41	14
Opinions on coaching practice	R3, R11	2
Identification of mentor-supported peer coaching competencies	R12	1
Effectiveness of the coaching professional development program	R22, R25, R27, R33	4
The relationship between coaching skills and different variables	R8, R10, R14, R18, R20, R24, R29, R31, R32, R38	10
The effect of coaching skills on different variables	R14, R20, R28, R33, R34	5
Effectiveness of coaching practices in teacher supervision	R39, R40	2

As can be seen in Table 1, the majority of the studies focused on the effect of coaching skills on teacher competencies, teaching, and students (R5, R6, R8, R9, R10, R15, R17, R19, R26, R30, R35, R36, R37, R41) and the relationship between coaching skills and different variables (R20, R24, R29, R31, R32, R38). It is seen that these studies were conducted to determine the coaching skills of different participants (R1, R2, R4, R7, R13, R18, R21, R23), the effect of coaching skills on different variables (R14, R20, R28, R33, R34) and the effectiveness of the coaching professional development program (R22, R25, R27, R33). It is seen that the other objectives in the studies are quite limited.

### Keywords Used in the Research

The keywords used in the studies were analyzed. Table 2 shows the results of the analysis of the keywords used in the studies.

**Table 2.** Keywords Used in Peer Coaching Research

Keyword	Related Research	(f)
Coaching	R1, R2, R5, R6, R7, R8, R10, R12, R13, R12, R14, R18, R19, R20, R21, R23, R27, R29, R30, R31, R33, R34, R36, R38, R39	25
Coah	R1, R2, R4, R5, R6, R7, R13, R23, R29	9
Peer coaching	R9, R25, R28, R37, R39, R40, R41	7
Leadership	R2, R4, R5, R10, R23, R32	6
Teacher	R9, R11, R17, R24, R29, R35	6
Professional development	R15, R22, R25, R30, R33	5
Teacher education	R22, R27, R30, R41	4
Mentoring	R10, R12, R23	3
Cognitive coaching	R3, R11, R35	3
Science and technology teaching	R3, R33	2
Job satisfaction	R14, R29	2
Technological pedagogical content knowledge	R15, R33	2
Math Coaching	R15, R22	2
Management	R5, R10	2
Performance	R5, R29	2
Coaching roles	R6, R24	2
School administrators	R6, R8	2
Coaching Skills of Teachers	R7, R13	2
Communication	R4, R5	2
Learning	R10, R11	2
Instructional leadership	R31, R32	2
Effectiveness	R17, R28	2
Education	R23, R34	2

As seen in Table 2, coaching, coach, peer coaching, leadership, teacher, teacher, professional development, teacher education are the most frequently used keywords in the studies. The word cloud for the keywords used in the studies analyzed is given below.



Figure 1. The word Cloud for Keywords

**Subject Areas in Peer Coaching Research**

Peer coaching studies were analyzed according to their subject areas. Figure 2 shows the topics covered in the studies.

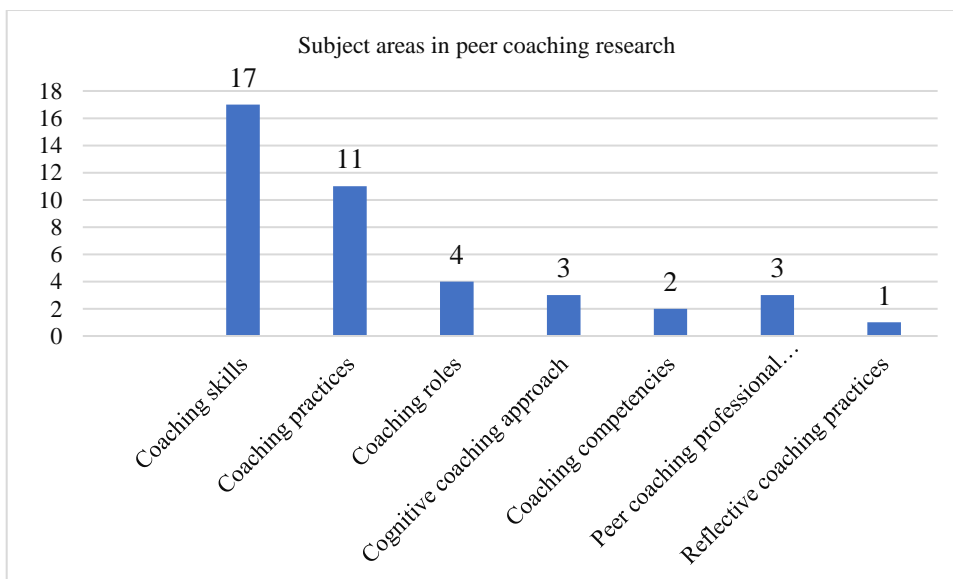


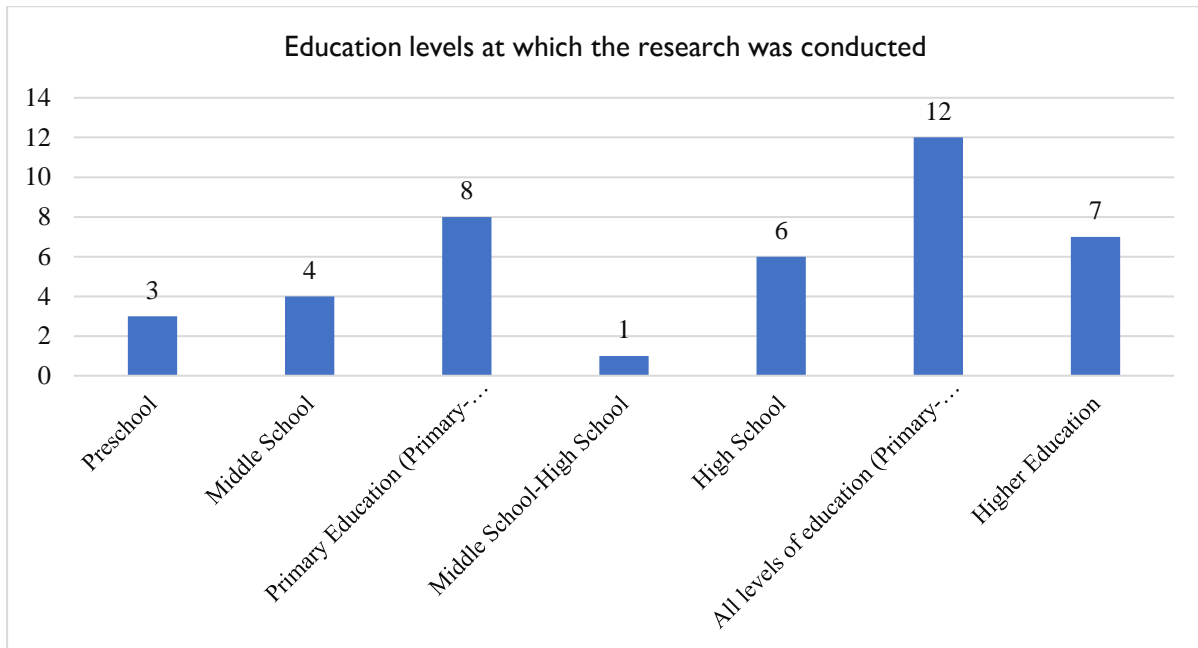
Figure 2. Subject Areas in Peer Coaching Research

When the studies were examined according to the subject areas, it was determined that the existing studies focused on coaching skills (R1, R2, R4, R5, R7, R8, R13, R14, R15, R16, R18, R19, R21, R29, R30, R31, R34) and coaching practices (R9, R10, R12, R17, R23, R28, R36, R37, R39, R40, R41). The majority of the studies examined are master's theses and are mostly descriptive studies on the coaching skills and coaching practices of teachers and administrators. It is seen that research on coaching competencies and coaching-based professional development programs is more limited.

**Education Levels at Which the Research was Conducted**

The educational levels at which peer coaching research was conducted were analyzed and the findings were interpreted. Figure 3 shows the educational levels at which the studies were conducted.





**Figure 3.** Educational Levels at which Peer Coaching Research was Conducted

In the analysis of the studies according to the levels of education, it was determined that most of the studies were conducted at primary, secondary and high school levels (R3, R17, R19, R21, R22, R25, R32, R34, R36, R39, R40, R41), followed by primary and secondary school levels (R5, R6, R7, R8, R11, R13, R15, R16). When the results are evaluated in general, it can be said that research on peer coaching has been conducted at all levels of education, including primary, secondary, and high school, and the effect of coaching practices has been tried to be determined at all levels.

### Methods Used in Research

The methods used in the studies were analyzed according to the methods, designs, and sub-designs of the studies on colleague coaching. The findings regarding the distribution of studies on peer coaching according to their methods, designs, and sub-designs are given in Table 3.

**Table 3.** Distribution of Studies According to Method, Design and Sub-Designs

Method	Design	Sub-design	Research	(f)
Quantitative (f=28, %=63)	Survey	Descriptive survey	R1, R2, R3, R6, R7, R8, R10, R13, R16, R18, R21, R23	12
		Relational survey	R5, R11, R14, R20, R24, R29, R31, R32, R35, R38	10
		Single survey	R4, R12	2
	Experimental	Static group pretest-posttest design	R27	1
		Pre-test-post-test control group design	R36	1
		Nested single case	R19	1
Qualitative (f=8, %=20)	Case	Unspecified	R15, R25, R28, R37, R40	5
		Phenomenology	R39	1
	Unspecified	R22	1	
Mixed research (f=5, %=12)	Intervention pattern	Unspecified	R30, R33	2
		Unspecified	R17, R26	2
	Descriptive sequential pattern	R41	1	
Unspecified (f=2, %=5)	Unspecified	Unspecified	R9, R34	2

According to the methods of the studies, it was determined that quantitative studies were predominant (R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R17, R19, R21, R22, R24, R25, R28, R30, R32, R33, R36, R37, R39). Among quantitative research designs, descriptive and correlational survey studies are mostly preferred. Qualitative (R15, R22, R25, R28, R37, R39, R40) and mixed method studies (R17, R26, R30, R33, R41) were conducted less frequently. In some studies (f=2), method and design information was not included.

### Participant/Sample Groups of the Research

The studies on colleague coaching were analyzed according to participant/sample groups. The findings related to the analysis of the studies on peer coaching according to participant/sample groups are given in Table 4.

**Table 4.** Distribution of Studies According to Sample/Study Group

Group/Participant	Research	(f)
Teachers from different branches	R4, R5, R7, R8, R12, R17, R19, R20, R21, R23, R24, R29, R31, R32, R33, R35, R37, R38	18
Teacher candidates	R3, R9, R11, R26, R41	5
Principal and teachers	R14, R18, R40	3
Mathematics teachers	R15, R22, R34	3
Preschool teachers	R27, R30, R36	3
School principals	R1, R39	2
Managers and teachers	R2, R6	2
Teaching staff	R25, R28	2
Classroom teachers	R10	1
High school students	R13	1
Information technologies guidance counselors	R16	1

As given in Table 4, when the distribution of the studies according to the sample/study group/data source group is analyzed, it is seen that teachers (R4, R5, R7, R8, R10, R12, R15, R17, R19, R20, R21, R22, R23, R24, R27, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38), followed by studies involving pre-service teachers (R3, R9, R11, R26, R41).

### Data Collection Tools Used in Research

The studies on colleague coaching were analyzed according to the data collection tools used in the studies. The findings regarding the distribution of the studies on peer coaching according to the data collection tools used in the studies are given in Table 5.

**Table 5.** Data Collection Tools Used in the Studies

Type	Data Collection Tools	Research	(f)
Quantitative data collection tools	Scale	R1, R2, R3, R8, R12, R13, R14, R16, R18, R20, R23, R24, R26, R27, R29, R30, R31, R32, R36, R38	20
	Survey	R4, R5, R6, R7, R10, R17, R21, R26, R32, R33, R36, R37	12
	Checklist	R9, R30	2
	Coaching skills assessment form	R11	1
	Self-assessment form	R25, R41	2
	Inventory	R35	1
	Interview	Semi-structured R9, R15, R17, R19, R22, R25, R27, R33, R34, R37, R39, R41	12
		Focus group R17, R40	2
	Observation	R9, R16, R19, R25, R27, R28, R33, R34, R36, R37	10
	Qualitative data collection tools	Video recording R9	1
	Coaching cycle form R15, R27	2	
	Researcher diary R26	1	
	Teacher diary R33	1	
	Meeting reflection form R37	1	

When Table 5 was analyzed, it was determined that quantitative research-based data collection tools were mostly preferred as data collection tools in the studies. Scale (R1, R2, R3, R8, R12, R13, R14, R16, R18, R20, R23, R24, R26, R27, R29, R30, R31, R32, R36, R38) and questionnaire (R4, R5, R6, R7, R10, R17, R21, R26, R32, R33, R36, R37) are the most preferred quantitative data collection tools. Interview (R9, R15, R17, R19, R22, R25, R27, R33, R34, R37, R39, R40, R41) and observation (R9, R16, R19, R25, R27, R28, R33, R34, R36, R37) are the most used qualitative data collection tools.



### Data Analysis Methods Used in Research

The data analysis methods used in the studies on colleague coaching were analyzed. The data analysis methods used in the analyzed studies are presented in Table 6.

**Table 6.** Distribution of Studies According to Data Analysis Methods

Type	Data Analysis Methods	Research	(f)
Quantitative	Descriptive Statistics	R3, R6, R7, R8, R11, R13, R14, R16, R17, R24, R29, R33, R36, R38, R41	15
	t test	R1, R2, R4, R5, R6, R8, R10, R12, R14, R16, R21, R24, R26, R27, R29, R31, R35, R36, R38	19
	ANOVA test	R1, R4, R5, R6, R8, R12, R18, R20, R21, R24, R29, R30, R31, R35, R36, R38	16
	Correlation analysis	R5, R7, R10, R14, R17, R18, R20, R24, R29, R31, R32, R35, R38	13
	Mann-Whitney U test	R1, R2, R7, R13, R27, R32, R41	7
	Kruskal-Wallis test	R1, R2, R7, R13, R21, R32	6
	LSD test	R2, R12, R16, R21	4
	Scheffe test	R2	1
	Tukey test	R4, R5, R6, R20	4
	Levene's test	R4, R5, R20, R36	4
	Chi-square test	R8, R17	2
	Regression analysis	R20, R24, R29, R31, R32	5
	Wilcoxon signed-rank test	R26, R27	2
	Qualitative	Content analysis	R9, R24, R26, R27, R33, R34, R37, R39, R40, R41
Descriptive analysis		R19, R24, R39	3
Inductive analysis		R22, R28	2
Didactic analysis		R15	1

When Table 6 is examined, it is seen that quantitative data analysis methods are mostly used in the studies. It can be stated that this situation is normal due to the intensity of the studies conducted with quantitative research methods. As quantitative data analysis methods, descriptive statistics (R3, R6, R7, R8, R11, R13, R14, R16, R17, R24, R29, R33, R36, R38, R41), t test (R14, R16, R21, R24, R26, R27, R29, R31, R35, R36, R38), ANOVA test (R1, R4, R5, R6, R8, R12, R18, R20, R21, R24, R29, R30, R31, R35, R36, R38), Correlation analysis (R5, R7, R10, R14, R17, R18, R20, R24, R29, R31, R32, R35, R38) were preferred. As qualitative data analysis methods, content analysis (R9, R24, R26, R27, R33, R34, R37, R39, R40, R41) was mostly used.

### The Results of the Studies

The results of the studies on colleague coaching were analyzed thematically. The results of the analyzed studies are presented thematically in Table 7.

**Table 7.** Thematic Analysis of Research Results

Thema	Results	Researches	(f)
Coaching skill levels	Teachers think that administrators have coaching skills.	R1, R5, R12, R20, R31	8
	Teachers think that supervisors do not have coaching skills.	R4	
	Teachers think that their coaching skills are high.	R16, R21	
Demographic variables and Coaching skills	Gender, age, marital status, branch, graduated faculty, having children, place of duty, field of duty, being a member of a professional organization and school type are not effective variables on coaching skills.	R1, R2, R4, R6, R7, R8, R21, R23, R32, R35	15
	Age, working in the same branch, professional seniority, school type, educational level and frequency of coaching meetings are effective variables on coaching skills.	R12, R13	
	Perceived coaching skills decreased as educational level and professional seniority increased.	R1, R6	
	Teachers working in private schools receive more coaching support.	R1	
Overall evaluation	Öğretmen adayları sınıf içi gözlem sürecinde kullanılan bilişsel koçluk etkinliklerini yeterli bulmaktadır.	R3	2
	Öğretmenler bilişsel koçluk uygulamalarını olumlu bulmakta	R11	
The effects of peer coaching	Coaching practices improve teachers' professional skills.	R15, R17, R22, R26, R27, R28, R30, R33, R34, R35, R36, R37, R39, R40, R41	21
	Coaching practices improve collaboration among colleagues.	R15, R22	

	Coaching practices increase students' achievement	R22, R34	
	Coaching improves teachers' beliefs about teaching and learning.	R19	
	Coaching practices improve the professional skills of teaching staff.	R25	
	Colleague coaching improves teachers' classroom management skills.	R9	
Relationships between peer coaching and other variables	There is a positive and moderately significant relationship between the level of coaching behavior of school principals and the leadership capacity of the school.	R18, R20	
	There is a significant positive relationship between the coaching skills of school administrators and the school becoming a learning organization.	R8	
	There is a significant positive relationship between teachers' coaching competencies and students' exam success.	R10	
	There is no relationship between school principals' coaching skills and teachers' job satisfaction.	R14	
	There is a positive and moderately significant relationship between teachers' perceptions of coaching roles and organizational identification levels.	R24	10
	There is a significant positive relationship between teachers' coaching skills and job satisfaction	R29	
	There is a significant positive relationship between school principals' perceptions of coaching behaviors and schools' academic optimism levels.	R31	
	There is a significant positive relationship between student coaching competence and teacher leadership.	R32	
	There is a significant positive relationship between school principals' coaching roles and teachers' organizational adjustment levels.	R38	

When the research results are analyzed, there are research results on the effects of peer coaching. According to the research results, there are many research results (R15, R17, R22, R25, R26, R27, R28, R30, R33, R34, R35, R36, R37, R39, R40, R41) that colleague coaching improves professional skills. In addition, it was determined that peer coaching improved teachers' classroom management skills (R9), contributed to collaboration among colleagues (R15, R22), increased students' academic achievement (R22, R34), and improved teachers' beliefs about learning and teaching (R19).

The effects of coaching skills in the context of demographic variables were also examined. In this context, it was determined that gender, age, marital status, branch, graduated faculty, having children, place of duty, field of duty, being a member of a professional organization and school type were not effective variables on coaching skills (R1, R2, R4, R6, R7, R8, R21, R23, R32, R35), while age, working in the same branch, professional seniority, school type, educational status and frequency of coaching meetings were effective variables on coaching skills (R12, R13). However, as the level of education and professional seniority increase, the perceived coaching skills decrease (R1, R16). This can be explained by the increase in professional knowledge and experience with the increase in professional experience and educational level and the decrease in the need for coaching support. Another noteworthy finding in the research results is that teachers working in private schools receive more coaching support (R1).

According to the results of the study, teachers found coaching practices to be adequate (R3) and positive (R11), and that they (R16, R21) and their supervisors had coaching skills (R1, R5, R12, R20, R31). However, teachers think that supervisors do not have coaching skills (R4).

In the studies, the relationships between coaching skills and different variables were addressed. In the studies, it was determined that there was a significant positive relationship between teachers' coaching competencies and students' course achievement (R10), there was a significant positive relationship between school administrators' coaching skills and the school becoming a learning organization (R8), the school's leadership capacity (R18, R20), schools' academic optimism levels (R31), and teachers' organizational adaptation levels (R38). Although there was no relationship between school administrators' coaching skills and teachers' job satisfaction (R14), there was a significant positive relationship between teachers' coaching skills and job satisfaction (R29). There was a significant positive relationship between teachers' perceptions of coaching roles and organizational identification levels (R24).

## DISCUSSION AND CONCLUSION

When the research findings are examined, it is seen that colleague coaching studies were generally conducted with the aims of determining the effect of coaching skills on teacher competencies, teaching, and students, determining the relationship between coaching skills and different variables, determining the coaching skill levels of different participants, and determining the effectiveness of colleague coaching professional development programs. Since teachers are the main object of teaching, the aims such as teachers' professional competence, professional skills, and determining the variables affecting teaching skills have been the main objectives of many studies from past to present (Baylor & Ritchie, 2002; Caires & Almeida, 2005, Cañadas, 2023; Krell et al., 2023; Lam et al., 2002; Medley, 1997; Richard, 2021; Selvi, 2010). In this context, it can be inferred that the fact that the teacher is the main object in teaching also affects most of the aims in the studies regarding the effect of coaching skills on teacher competencies, teaching, and students. One of the main objectives of effective teaching is to increase students' success in the course (Béteille & Evans, 2015; Dalton, 2007). Peer coaching offers rich opportunities for teachers to contribute to students' learning as well as their professional skills (Keiler, 2018; Rhodes & Beneicke, 2002; Zepeda, 2017). In this context, it can be inferred that in a sense the purposes of peer coaching were tested in the studies.

According to the research findings, coaching, coach, peer coaching, leadership, teacher, teacher, professional development, and teacher education were the most frequently used keywords in the studies. Since peer coaching is one of the effective professional development tools (Desimone & Pak, 2017; Dunst et al., 2015; Hooker, 2013; Ilgan, 2021), it can be said that it is a normal result that coaching, coach, peer coaching, teacher, professional development, teacher education are the most frequently used keywords.

When the research is analyzed according to the subject areas, it is seen that the existing research generally focuses on coaching skills and coaching practices. Teachers need to have coaching skills to coach colleagues and guide their peers (Hagen et al., 2017; Showers & Joyce, 1996). For teachers to be effective peer coaches and to prepare professional development programs for peer coaching skills, teachers' coaching skill levels should be determined. In this context, it can be said that studies describing the coaching skills of teachers are intensive. In addition, it can be evaluated that the intensity of research on coaching practices to test the expected outcomes of coaching practices is a normal result.

When the studies were analyzed according to the levels of education in which the studies were conducted, it was determined that most of the studies were conducted at three levels, namely primary school, secondary school, and high school, and then the studies were concentrated at primary and secondary school levels. When the results are evaluated in general, it can be said that research on peer coaching has been conducted at all levels of education and the effects of coaching practices have been tried to be determined at all levels. Based on the research findings, it was determined that peer coaching is an effective professional development tool applied at all levels of education. Similar studies have also found that peer coaching is an effective professional development tool at different levels of education (Dignath & Büttner, 2008; Harris & Sass, 2011; Kraft et al., 2018).

When the studies were analyzed, it was determined that most of the studies were conducted with teachers, followed by studies with pre-service teachers. Peer coaching is one of the effective professional development tools for teachers (Desimone & Pak, 2017; Dunst et al., 2015; Hooker, 2013; Ilgan, 2021). Since the coaching skills of teachers and the effect of coaching skills on teachers' professional development and professional competence are tested in the studies, it can be said that it is an expected result that the focus participant group is teachers.

According to the findings of the research, it was determined that quantitative studies were predominant according to their methods, and descriptive and relational survey studies were mostly preferred in quantitative studies. In similar studies in educational sciences, it was determined that quantitative studies were in the majority (Michalca & Miclea, 2007; Ozan & Kose, 2014; Sarac, 2017; Yildiz, Cengel & Alkan, 2020). According to these results, it can be inferred that the quantitative paradigm is still dominant in peer coaching research in Türkiye. Another noteworthy finding of the study is that mixed-method research is quite insufficient. The reason for this situation can be said to be the fact that the studies are generally at the level of articles and master's degrees and are univariate or bivariate studies. In the systematic analysis studies conducted in different fields in the field of educational sciences, it was determined that mixed-method research is limited (Aktan & Egdemir, 2022; Bilgin, 2019; Kosar, 2020).

According to the research results, scale and survey are the most preferred data collection tools. This finding can also be expressed because of the abundance of quantitative studies in the studies examined. It can be said that scales developed on certain subjects are preferred because they are used in similar studies, are easy to collect data, and reach more participants in a short time (Üztemur & Gokalp, 2023). Similarly, it can be said that surveys

are preferred because they are easy to prepare, allow reaching more people in a short time, and are easier to analyze than other measurement tools (Aktan & Tekin, 2023). In some studies, similar results were obtained indicating that scales and surveys were used the most (Alper & Gülbahar, 2009; Dogan & Tok, 2018, Ozan & Kose, 2014; Oner & Turkoglu, 2020). According to the research results, interviews and observation are the most commonly used qualitative data collection tools. In similar studies, it was determined that interviews and observations were mostly used as qualitative data collection tools (Karadag, 2014; Kiranlı Gungor & Gungor, 2020; Kosar et al., 2017; Sonmez & Ozcan, 2020). It can be inferred that the fact that observation is a frequently used data collection tool in peer coaching and classroom practices (Bell & Mladenovic, 2008; Jenkins et al., 2002) also has an impact on the research results. According to the research results, it was determined that quantitative data analysis methods were mostly used in the research. It can be stated that this situation is normal due to the abundance of research conducted with quantitative research methods. Descriptive statistics, ANOVA test, and Correlation analysis were most preferred as quantitative data analysis methods. The content analysis method was mostly used as a qualitative data analysis method. It has been determined that similar quantitative data analysis methods are frequently used in different studies examining research trends in educational sciences (Aktan & Egdemir, 2022; Ceyhun & Kose, 2014; Dogan & Tok, 2018; Hark Soylemez & Adiyaman, 2023; Orakci, 2023). It was determined that the content analysis method was most used as the qualitative data analysis method. In similar studies, it was determined that content analysis was most used as the qualitative data analysis method (Gungor & Saracoglu, 2023; Nazli et al., 2023; Yilmaz, 2019).

When the research results are examined, the research results on the effects of peer coaching attract the most attention. According to the research results, many research results show that peer coaching improves teachers' professional skills. In addition, it was determined that peer coaching improved teachers' classroom management skills, contributed to collaboration between colleagues, increased students' academic success, and improved teachers' beliefs about learning and teaching. The research results appear to be consistent with the results of research on the effects of peer coaching (Bruns et al., 2018; Desimone & Pak, 2017; Hooker, 2013; Ilgan, 2021; Kraft et al., 2018; Lu, 2010). In research, the effects of coaching skills have also been examined in the context of demographic variables. In this context, gender, age, marital status, branch, faculty from which you graduated, having children, place of duty, field of duty, membership in a professional organization, and school type are not effective variables on coaching skills, age, working in the same branch, professional seniority, school Type, educational status and frequency of coaching meetings were determined to be effective variables on coaching skills. Additionally, as education level and professional seniority increase, perceived coaching ability decreases. This result can be explained by the increase in professional experience and education, the increase in professional knowledge and experience, and therefore the decrease in the need for coaching support. Another striking finding in the research results is that teachers working in private schools receive more coaching support. In private schools, due to economic concerns, teacher qualifications become more prominent, and in this context, it can be inferred that coaching practices are given more emphasis in private schools.

According to the results of the research, it was determined that teachers found the coaching practices sufficient and positive and that they and their managers had coaching skills. It can be inferred that the fact that peer coaching practices directly affect student learning, as well as professional skills, has an impact on this result. However, teachers think that supervisors do not have coaching skills. Research has examined the relationships between coaching skills and different variables. In the research conducted, it was determined that there was a positive significant relationship between the coaching competencies of the teachers and the course success of the students and that there was a positive significant relationship between the coaching skills of school administrators and the school's transformation into a learning organization, the leadership capacity of the school, the academic optimism levels of the schools, and the organizational adaptation levels of the teachers. It can be concluded that the school principal's coaching skills have a positive impact on the school organization in many ways. Although there is no relationship between the coaching skills of school administrators and teachers' job satisfaction in research; It was determined that there was a positive significant relationship between teachers' coaching skills and job satisfaction. According to this result, teachers' performance of coaching skills also positively affects their professional satisfaction. In a way, teachers enjoy guiding and directing their colleagues. It was determined that there was a positive significant relationship between teachers' perceptions of their coaching roles and their organizational identification levels. According to this result, it can be inferred that the institutional affiliation of teachers who fulfill their coaching roles also increases. According to the research results, the following recommendations were developed. Experimental research can be conducted with research groups involving students on the reflections of coaching practices on students. Considering that research topics on coaching roles and coaching competencies are limited, different research can be conducted on these topics. Considering that research on preschool and primary school levels is limited, peer coaching practices and research can be conducted for teachers working at these levels. Considering the intensive use of quantitative methods and data collection tools in research, emphasis can be placed on qualitative and mixed-method research in new research. According to the research results, the variables that peer coaching is effective and related to can be taken into consideration in new research and applications.

### Statement of Researchers

**Researcher's contribution rate statement:** All processes of the research were carried out by the researcher.

**Conflict statement:** I declare that there is no conflict of interest in the preparation, implementation, collection, interpretation of results, and writing of this article.

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