Classroom teachers' professional development needs as lifelong learning: Which topics and by methods?

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Abstract

The aim of this study is to identify the topics that classroom teachers in Turkey need in their professional development as lifelong education and which types of methods are useful. Although similar studies have been conducted for this purpose, this study also aims to reveal the relationship between the degree of need of the subjects and the perception of which method would be useful. Thus, information will be provided to those who prepare professional development curriculum about which topics should be given by which method. The research is in survey model. The data of the study were obtained from the Progress in International Reading Literacy Study (PIRLS) 2021 study. The analysis of the study was conducted with teachers from Turkey who participated in the study and answered "yes" to the question "during your <post-secondary> education, what was your major or main area(s) of study?". Within the scope of PIRLS 2021, teachers were asked "how would you prioritize your need for future professional development?" to determine their needs in seven subject areas as "high", "medium" and "low". In the same questionnaire, teachers were asked "how helpful is each type of professional development?" to determine which method is helpful as "helpful", "somewhat helpful" and "not helpful". Frequency, percentage and Goodman-Kruskal Gamma test were used to analyze the data. According to the results of the analysis, "integrating technology into reading instruction" is the subject that teachers need the most. The method that is seen as the most useful by the teachers is "access to a mentor". When the relationship between the most needed topic and the most useful method was examined, it was determined that "access to a mentor (e.g., literacy coach)" and "teacher professional learning communities" practices produced a significant relationship with all subject areas. The highest relationship was found between "access to a mentor (e.g., literacy coach)" and "addressing differentiation of instruction for students' needs and interests". Accordingly, it is recommended that those who design a professional development program for classroom teachers should prepare a program on "access to a mentor (e.g., literacy coach)" method and "addressing differentiation of instruction for students' needs and interests".

Keywords: Classroom teacher, professional development needs, type of professional development

Introduction

Lifelong learning is a concept that emerges in line with the needs of today's world (Poyraz & Titrek, 2013) and is a research area of increasing interest (Hursen, 2016; Nylander & Fejes, 2023). A type of lifelong education plan professional development is an important factor in realising the goals of educational institutions through teachers (Jurs et al, 2023). In addition to, the studies examining the effect of training on student learning outcomes have found a positive relationship between student learning outcomes and teacher participation in training (Fujitani, Muta, & Ota 2011; Patfield, Gore, & Harris, 2023). However, studies show that activities for teachers' professional development are not effective enough (Opfer & Pedder, 2011; Boulay, Hamel, & Hamel, 2023). Moreover Settaşı and Vural (2023) claim that there is a correlation between epistemological beliefs and lifelong learning tendencies of teachers and this positive tendencies affecting teachers' professional developments process.

In order for a curriculum program to be successful, it must be designed in accordance with the curriculum development steps. The curriculum development process starts with a needs analysis (Demirel, 2021). The curriculum comes to life with the implementation phase. No matter how correctly a curriculum is prepared, it cannot be effective if it is not implemented with the right methods that will affect the participants of the curriculum. Therefore, it is important to determine the topics needed and the appropriate methods.

With the results of this study, it will be tried to fill the gap between theory and practice by determining the methods that classroom teachers prefer to be used in their professional development. These results will guide educational institutions and policy makers who play an active role in the professional development of teachers to prepare more effective training programmers. However, revealing the relationship between the subjects that classroom teachers' need and the methods they prefer in teaching them will support a holistic understanding linking teacher needs, curriculum design and pedagogical approaches. Thus, teachers' professional development will be improved and valuable information will be provided to improve the quality of education in primary schools.

The importance of mother tongue education for school success is known all over the world. The foundation of mother tongue education is laid in primary school. Therefore, it is important that classroom teachers have developed themselves in reading teaching.

In this study, answers to the following questions were sought:
1. What are the topics that primary school teachers need the most in terms of literacy?
2. What are the methods that primary school teachers think are most useful for their professional development?
3. Is there a relationship between the subjects that primary school teachers need most in literacy and the methods that they think are most useful for them in professional development?

Method

The research is in the survey model. The research was carried out based on the data of the PIRLS 2021 study. PIRLS 2021 is based on the two-stage cluster sample design; in the first stage, the schools of the students in the target population are included in the probability according to their size, while in the second stage, the classes in the schools selected in the first stage are selected (Almaskut, LaRoche, & Foy, 2023). In this study, "during your <post-secondary> education, what was your major or main area(s) of study?" 208 classroom teachers who answered "yes" to the "Education—Primary/Elementary" option were included. The distribution of the participants by age and gender is presented in Table 1.

Table 1. The participations

Age Of Teacher	Gender of Teacher		Total
	Female	Male	
Under 25	7	1	8
25–29	20	8	28
30–39	51	23	74
40–49	33	26	59
50–59	15	14	29
60 or more	6	4	10
Total	132	76	208

The research questions consist of two main questions. The first question is "how would you prioritize your need for future professional development?". Within the scope of this question, "teaching reading comprehension skills or strategies", "integrating literacies across the curriculum", "needs addressing students' language needs in teaching reading", "integrating technology into reading instruction", "instruction related to digital literacies", "addressing differentiation of instruction for students' needs and interests", and "assessing students' reading" are topics. Teachers were asked to answer these subject areas at the "high", "medium" or "low" level.

The second research question was "How useful is each type of professional development? This question included 'workshop', 'seminar', 'access to a mentor (e.g. literacy coach)', 'teacher professional learning communities' and 'online professional development'. Teachers were asked to respond to these questions by ticking one of the options 'helpful', 'somewhat helpful' and 'not helpful'.

The data of the study were obtained from the PIRLS 2021 page. Percentage and frequency were calculated in the analysis of the data. Gamma coefficient (Karagöz, 2010) was calculated to determine the relationships between the topics needed for professional development and the methods considered to be useful. A value of 0.05 was accepted as the critical value for significance. Significant results were interpreted according to the values in Table 2 (Rea & Parker, 2014, s.229).

Table 2. The interpretation of Gamma

Measure	Interpretation
0	No association
0,01-0,09	Negligible association

0,10-0,29	Low association
0,30-0,59	Moderate association
0,60-0,74	Strong association
0,75-0,99	Very strong association
1,00	Perfect association

Cite: Rea & Parker (2014, s.229).

Findings

In this part of the study, the research questions were tried to be answered. The first question of the research is to determine the issues that classroom teachers' priorities for professional development in the future. For this purpose, the level of the subjects was evaluated by frequency and percentage. The results are presented in Table 3.

Table 3. Topics that classroom teachers prioritize for their future professional development needs

Subjects	Level	Frequency	Percent
Teaching reading comprehension skills or strategies	High	104	51,7
	Medium	75	37,3
	Low	22	10,9
	Total	201	100,0
Integrating literacies across the curriculum	High	89	44,5
	Medium	91	45,5
	Low	20	10,0
	Total	200	100,0
Needs addressing students' language needs in teaching reading	High	82	41,0
	Medium	93	46,5
	Low	25	12,5
	Total	200	100,0
Integrating technology into reading instruction	High	106	53,0
	Medium	77	38,5
	Low	17	8,5
	Total	200	100,0
Instruction related to digital literacies	High	103	51,5
	Medium	81	40,5
	Low	16	8,0
	Total	200	100,0
Addressing differentiation of instruction for students' needs and interests	High	100	50,0
	Medium	85	42,5
	Low	15	7,5
	Total	200	100,0
Assessing students' reading	High	97	48,3
	Medium	84	41,8
	Low	20	10,0
	Total	201	100,0

When Table 3 is analysed, it is seen that most of the classroom teachers expressed their need in the field of "Integrating technology into reading instruction" (53%). This area was followed by "teaching reading comprehension skills or strategies" in second place and "instruction related to digital literacies" in third place. The second problem of the research is to examine classroom teachers' perceptions about which of the types of professional development activities would be more beneficial. The results of this research are presented in Table 4.

Table 4. The methods that primary school teachers think are most useful for their professional development

Types	Levels	Frequency	Percent
Workshop	Helpful	112	54,63
	Somewhat helpful	80	39,02
	Not helpful	13	6,34

	Degree	Count	%
	Total	205	100,00
Seminar	Helpful	117	57,35
	Somewhat helpful	73	35,1
	Not helpful	14	6,7
	Total	204	98,1
Access to a mentor (e.g., literacy coach)	Helpful	94	45,85
	Somewhat helpful	83	40,49
	Not helpful	28	13,66
	Total	205	100,00
Teacher professional learning communities	Helpful	141	68,45
	Somewhat helpful	59	28,64
	Not helpful	6	2,91
	Total	206	100,00
Online professional development	Helpful	94	45,85
	Somewhat helpful	83	40,49
	Not helpful	28	13,66
	Total	205	100,00

As seen in Table 4, the most preferred methods by classroom teachers are "teacher professional learning communities" (68,45%), "seminar" (57,35%) and "workshop" (54,63%). The other two methods, "access to a mentor (e.g., literacy coach)" (45,85%) and "online professional development" (45,85%) are close to half and have similar rates. The third problem of the research is to reveal the relationship between the professional development topics that classroom teachers need in the future and the methods that they think can be useful in professional development. The results of the Gamma analysis conducted in this regard are presented in Table 5.

Table 5. The relationship between the issues needed and the methods believed to be useful

Area	Types	Degree	Levels			Total	Gamma
			High	Medium	Low		
Teaching reading comprehension skills or strategies	Workshop	Helpful	65	38	7	110	,318* Moderate association
		Somewhat helpful	35	32	11	78	
		Not helpful	4	4	4	12	
		Total	104	74	22	200	
	Seminar	Helpful	62	44	8	114	,158
		Somewhat helpful	35	27	10	72	
		Not helpful	7	3	4	14	
		Total	104	74	22	200	
	Access to a mentor (e.g., literacy coach)	Helpful	88	45	13	146	,488* Moderate association
		Somewhat helpful	16	29	8	53	
		Not helpful	0	0	1	1	
		Total	104	74	22	200	
	Teacher professional learning communities	Helpful	79	46	10	135	,370* Moderate association
		Somewhat helpful	23	26	10	59	
		Not helpful	2	2	2	6	
		Total	104	74	22	200	
	Online professional development	Helpful	52	31	6	89	,183
		Somewhat helpful	37	36	10	83	
		Not helpful	15	7	6	28	
		Total	104	74	22	200	
Integrating literacies across the curriculum	Workshop	Helpful	56	44	10	110	,268* Low association
		Somewhat helpful	32	37	7	76	
		Not helpful	1	9	3	13	
		Total	89	90	20	199	
	Seminar	Helpful	57	48	9	114	,229*

		Somewhat helpful	28	34	9	71	Low association
		Not helpful	4	8	2	14	
		Total	89	90	20	199	
	Access to a mentor (e.g., literacy coach)	Helpful	77	57	11	145	,526* Moderate association
		Somewhat helpful	12	33	8	53	
		Not helpful	0	0	1	1	
		Total	89	90	20	199	
	Teacher professional learning communities	Helpful	71	53	10	134	,438* Moderate association
		Somewhat helpful	17	34	8	59	
		Not helpful	1	3	2	6	
		Total	89	90	20	199	
	Online professional development	Helpful	46	38	6	90	,199
		Somewhat helpful	31	42	8	81	
		Not helpful	12	10	6	28	
		Total	89	90	20	199	
Needs addressing students' language needs in teaching reading	Workshop	Helpful	53	45	12	110	,291* Low association
		Somewhat helpful	28	39	9	76	
		Not helpful	1	8	4	13	
		Total	82	92	25	199	
	Seminar	Helpful	53	51	10	114	,262* Low association
		Somewhat helpful	26	33	12	71	
		Not helpful	3	8	3	14	
		Total	82	92	25	199	
	Access to a mentor (e.g., literacy coach)	Helpful	71	59	15	145	,476* Moderate association
		Somewhat helpful	11	33	9	53	
		Not helpful	0	0	1	1	
		Total	82	92	25	199	
	Teacher professional learning communities	Helpful	66	55	13	134	,439* Moderate association
		Somewhat helpful	16	34	9	59	
		Not helpful	0	3	3	6	
		Total	82	92	25	199	
	Online professional development	Helpful	45	38	7	90	,262* Low association
		Somewhat helpful	27	42	12	81	
		Not helpful	10	12	6	28	
		Total	82	92	25	199	
Integrating technology into reading instruction	Workshop	Helpful	66	37	7	110	,293* Low association
		Somewhat helpful	36	34	6	76	
		Not helpful	4	5	4	13	
		Total	106	76	17	199	
	Seminar	Helpful	65	42	7	114	,199
		Somewhat helpful	36	28	7	71	
		Not helpful	5	6	3	14	
		Total	106	76	17	199	
	Access to a mentor (e.g., literacy coach)	Helpful	87	48	10	145	,425* Moderate association
		Somewhat helpful	19	28	6	53	
		Not helpful	0	0	1	1	
		Total	106	76	17	199	
	Teacher professional learning communities	Helpful	82	45	7	134	,488* Moderate association
		Somewhat helpful	19	33	7	59	
		Not helpful	2	2	2	6	
		Total	103	80	16	199	
	Online professional development	Helpful	52	32	6	90	,131
		Somewhat helpful	39	36	6	81	
		Not helpful	15	8	5	28	
		Total	106	76	17	199	
Instruction related to digital literacies	Workshop	Helpful	66	37	7	110	,361* Moderate association
		Somewhat helpful	35	37	4	76	
		Not helpful	2	6	5	13	
		Total	103	80	16	199	
	Seminar	Helpful	62	43	9	114	,141
		Somewhat helpful	37	30	4	71	

		Not helpful	4	7	3	14	
		Total	103	80	16	199	
	Access to a mentor (e.g., literacy coach)	Helpful	87	50	8	145	,525* Moderate association
		Somewhat helpful	16	30	7	53	
		Not helpful	0	0	1	1	
		Total	103	80	16	199	
	Teacher professional learning communities	Helpful	82	45	7	134	,488* Moderate association
		Somewhat helpful	19	33	7	59	
		Not helpful	2	2	2	6	
		Total	103	80	16	199	
	Online professional development	Helpful	52	32	6	90	,160
		Somewhat helpful	37	38	6	81	
		Not helpful	14	10	4	28	
		Total	103	80	16	199	
Addressing differentiation of instruction for students' needs and interests	Workshop	Helpful	60	41	9	110	,179
		Somewhat helpful	35	37	3	75	
		Not helpful	4	6	3	13	
		Total	99	84	15	198	
	Seminar	Helpful	59	45	9	113	,071
		Somewhat helpful	33	34	4	71	
		Not helpful	7	5	2	14	
		Total	99	84	15	198	
	Access to a mentor (e.g., literacy coach)	Helpful	85	50	9	144	,536* Moderate association
		Somewhat helpful	14	34	5	53	
		Not helpful	0	0	1	1	
		Total	99	84	15	198	
	Teacher professional learning communities	Helpful	75	49	10	134	,283* Low association
		Somewhat helpful	23	33	3	59	
		Not helpful	2	2	2	6	
		Total	100	84	15	199	
	Online professional development	Helpful	47	36	7	90	,051
		Somewhat helpful	38	37	5	80	
		Not helpful	14	11	3	28	
		Total	99	84	15	198	
Assessing Students' Reading	Workshop	Helpful	61	40	9	110	,297* Low association
		Somewhat helpful	32	37	7	76	
		Not helpful	3	6	4	13	
		Total	96	83	20	199	
	Seminar	Helpful	60	46	8	114	,222
		Somewhat helpful	31	32	8	71	
		Not helpful	5	5	4	14	
		Total	96	83	20	199	
	Access to a mentor (e.g., literacy coach)	Helpful	82	51	12	145	,494* Moderate association
		Somewhat helpful	14	32	7	53	
		Not helpful	0	0	1	1	
		Total	96	83	20	199	
	Teacher professional learning communities	Helpful	76	49	10	135	,418* Moderate association
		Somewhat helpful	20	31	8	59	
		Not helpful	1	3	2	6	
		Total	97	83	20	200	
	Online professional development	Helpful	49	35	6	90	,176
		Somewhat helpful	34	37	10	81	
		Not helpful	13	11	4	28	
		Total	96	83	20	199	

*p<0,05

When Table 5 is examined, it is seen that each method is related to one topic at most. It is seen that the "teacher professional learning communities" method, which is considered to be the most effective by most of the classroom teachers, has a significant relationship in "positive" and "moderate association" level with all other areas except "addressing differentiation of instruction for students' needs and interests". The relationship between the "teacher

professional learning communities" method and the "addressing differentiation of instruction for students' needs and interests" domain is in the "positive" and "low association" level.

There was a significant relationship between the seminar, which was the second most useful method perceived by the classroom teachers, and only "integrating literacies across the curriculum" and "addressing students' language needs in teaching reading" in the "positive " and "low association" level. No significant relationship was found between the seminar and other topics.

The third method considered most useful by the classroom teachers was the "workshop". There is a significant relationship between this method and "teaching reading comprehension skills or strategies" and "instruction related to digital literacies" in "positive" and "moderate association" level. Again, there is a significant relationship between this method and "integrating literacies across the curriculum", "addressing students' language needs in teaching reading", "integrating technology into reading instruction" and "assessing students' reading" in "positive" and "low association" level. There is no significant relationship between this method and "addressing differentiation of instruction for students' needs and interests".

There is a positive and moderate association between "teacher professional learning communities", which is not among the top three most effective methods by most of the classroom teachers, and all subjects except "addressing differentiation of instruction for students' needs and interests". There is a positive and "low level" significant relationship with "addressing differentiation of instruction for students' needs and interests". In other words, there is a significant relationship between all subject areas of "teacher professional learning communities".

With the "online professional development" method, only "addressing students' language needs in teaching reading" has a significant relationship at a positive "low association" level.

Results, Conclusions and Recommendations
In this study, it was determined that the subject that classroom teachers most needed was "integrating technology into reading instruction". Yang, Kuo, Ji and McTigue (2018) stated in their study that technology increases students' reading motivation in reading instructions facilitates the multi-faceted presentation of information and supports collaborative learning. Today, adults and children are surrounded by technological devices (Chung, 2019; Magano, Alves, Durão, & de Carvalho, 2020). Technological devices naturally attract the attention of children at the age of learning to read. It is one of the conditions of the age that teachers need this subject for motivation. On the other hand, this study data was collected under the influence of the Covid-19 pandemic. Classroom teachers, like other teachers, tried to integrate technology into teaching. Another reason why this subject area has come to the fore is the Covid-19 pandemic. The necessity of using technology in the pandemic process and the inadequacies that emerged in this process have caused this subject area to come to the fore.

In the study, it was tried to determine the methods that the classroom teachers found most useful. According to the study findings, "teacher professional learning communities" are the method that classroom teachers find most useful. "The teacher learning community (TLC) is a learning group organized by teachers based on a shared goal and a sense of belonging to the subordinate team" (Zhao, Guo, & Liu, 2021). Studies have shown that TLCs in schools is usefully (Jaworski & Potari, 2021; Pan & Cheng, 2023). This approach is mostly based on co-development and continuous cooperation (Darling-Hammond and McLaughlin, 1995). Thus, teachers do not stay alone, they are in professional development all together.

In this study, there is a significant relationship at the level of "moderate association" between the "access to a mentor" method and all the subjects needed for professional development. Mentoring contributes to teachers' self-efficacy (Schipper et al., 2020). Self-efficacy has a significant effect on student learning (Koul, et al, 2023). At the same time, mentoring involves a more experienced individual helping another more experienced colleague. This process also points to Vygotsky's concept of zone of proximal development (Nguyen, 2017). The interaction will be effective in increasing teachers' knowledge and skills.

The workshop, which was the third most preferred method in the study, showed a significant relationship with all subject areas except "addressing differentiation of instruction for students' needs and interests". The "online professional development" method, on the other hand, showed a low level of significant relationship only with "addressing students' language needs in teaching reading". Another striking result of the study is that although the "seminar" method was thought to be the most useful method, no significant relationship was found with the other subject areas except for "integrating literacies across the curriculum" and "addressing students' language needs in teaching reading".

This study also revealed the opinions of classroom teachers in Turkey about the professional development issues they need about reading and which method is more effective. On the other hand, the relationship between method and subject was analyzed. While the results of the study showed similar results with the literature, it was determined that the seminar method, which was thought to be effective in this study, was not related to many subject areas. Accordingly, those who prepare professional development curriculums should not only determine the topics needed, but also get ideas about which methods can better understand these topics. No matter how well a curriculum is prepared, it only comes to life in practice. It should not be forgotten that the effectiveness of a curriculum depends on the appropriate method of implementation.

Generally summarized, the approach that classroom teachers find most useful in the issues they need for their professional development is "teacher professional learning communities", while mentoring comes second. Both approaches are actually based on collaborative learning environments, supporting teacher collaboration and facilitating different professional development needs to be addressed together. These results emphasize that those developing programs for the professional needs of classroom teachers should not only identify relevant topics but also consider the most effective methods for implementation.

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