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Examination of Curriculum Literacy Levels of Secondary School Teachers: A Mixed Method Research

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Article Type: Research Article
Received Date: 02.04.2023
Accepted Date: 24.07.2023
Published Date: 31.07.2023
Plagiarism: This article has been reviewed by at least two referees and scanned via a plagiarism software
Doi: 10.29329/tayjournal.2023.543.13

Citation: Hamurcu, G. C. (2023). Examination of curriculum literacy levels of secondary school teachers: a mixed method research. *Türk Akademik Yayınlar Dergisi (TAY Journal), 7*(2), 640-667.

Abstract

The aim of this study is to examine the curriculum literacy levels of teachers working in public secondary schools in Kayseri in terms of some variables. In this study, a mixed method, in which qualitative and quantitative research designs are considered together, was used. In the quantitative part of the study, the survey model was preferred, and 504 teachers were reached by using the simple random sampling method. In the quantitative part of the study, the data were collected with the "Curriculum Literacy Scale". In the qualitative part of the research, the case study design was used; data were collected through semi-structured interviews with 21 teachers who participated in the quantitative data collection process. According to the quantitative results of the study, it was concluded that secondary school teachers' perceptions of curriculum literacy level were high and that all teachers were highly curriculum literate regardless of their seniority. It was also identified that the school type variable had no effect on curriculum literacy and that there was no significant difference between the curriculum literacy levels of the teachers according to the branch variable. As for the qualitative result of the research, it was concluded that the knowledge levels of the teachers about the term "curriculum literacy" and 4 components of the curriculum (objectives, content, instructional methods and evaluation) were generally sufficient. Accordingly, it was seen that the qualitative results of the research supported the quantitative results.

Keywords: Curriculum, curriculum literacy, mixed method, explanatory sequential design.

Introduction

Teachers have important roles and responsibilities in teaching applications and raising individuals suitable for the changing needs of society. It is essential for educators, who are one of the crucial components of the education system, to have some knowledge and competencies to educate their students as well-equipped individuals. Preparing teachers qualified enough to organize and maintain high-quality teaching that will help pupils realize their potential is a difficult task for teacher education systems worldwide (Neumann, Kind, & Harms, 2018). First of all, the content of this knowledge that teachers should possess must be determined. According to Shulman (1987), the knowledge that teachers should have can be listed as "Content Knowledge", "General Pedagogical Knowledge", "Curriculum Knowledge", "Pedagogical Content Knowledge", "Knowledge of Learners", "Knowledge of Educational Contexts" and "Knowledge of Educational Aims, Purposes, and Values".

The curriculum is a guiding map for teaching activities; it determines the targeted results for teaching, the content to achieve these goals, the learning-teaching situations and the appropriate measurement tools (Çetinkaya & Tabak, 2019). For this reason, they are the most valuable guides for teachers responsible for the teaching process. However, Cuban (1993) states that what a teacher teaches in practice and the intended curriculum may differ. The implemented curriculum results from teachers' experiences, attitudes, competencies, and interpretations of the official curriculum (Tikkinena, Korkeamäki, & Dreher, 2020). With their practical knowledge and skills, teachers make appropriate adaptations to the curriculum (Duffee & Aikenhead, 1992). Although a single program is sent from the center, most teachers plan the course content themselves, and as a result, students in different classes encounter different applications (Steiner, 2018). Teachers must make decisions by using their professional knowledge at every teaching stage. Each teacher uses their knowledge and skills in this decision stage, which can be regarded as the main factor leading to the differences in the implementation of the programs.

Similarly, Asebiomo (2009) states, “No matter how well-formulated a curriculum is, its effective implementation is a must condition for achieving the desired objectives of education.” If a curriculum is not implemented effectively, all the efforts spent in the planning and development will be wasted (Ejike, 2018, p. 64). Since the curriculum is the most important resource for teachers, teachers must be curriculum literate to make maximum use of this resource. Even if all the conditions for education are ideal, the desired teaching success cannot be achieved if the teachers lack the essential knowledge and talent to carry out the curriculum (Wiles, 2009/2016). The concept of curriculum literacy [CL] was first used in Akınoğlu and Doğan's (2012) study titled "A New Concept Suggestion for Curriculum Development in Education: Curriculum" in the Turkish literature. Researchers have suggested the concept of “Curriculum literacy” to describe teachers' understanding of the program, their attitudes towards the program, and their ability to transform it into practice (Akınoğlu & Doğan, 2012). “Curriculum literacy is the teacher's being aware of the specific features of the education programs, using this awareness for practice, using the education program as a guide by making critical evaluations and interpretations” (Keskin & Korkmaz, 2021). Curriculum literacy [CL] refers to the skills of teachers to know, understand and apply all aspects of the program they employ (Erdem & Eğmir, 2018). According to Akyıldız (2020), curriculum literacy has two dimensions: knowledge and skill. The knowledge dimension includes the teachers' knowledge about "The implementation and evaluation processes of the program" and in the skill dimension, the skills related to "Designing, implementing and evaluating the learning-teaching processes” can be listed.

Curriculum implementation, which is the basis of every school's success or failure, is significant (Ogar & Opoh, 2015). The teachers who implement the curriculum must be curriculum literate. After Akınoğlu and Doğan (2012) added the concept of CL to the literature, research on teachers' CL levels gained momentum, and the first scale development study was carried out by Bolat (2017). Bolat's (2017) work was followed by other scale development studies (Akyıldız, 2020; Kasapoğlu, 2020; Keskin & Korkmaz, 2021; Yar Yıldırım & Dursun, 2019; Yar Yıldırım, 2020; Yıldırım, 2019). When studies on CL in recent years are reviewed, it is detected that pre-service teachers (Çetinkaya and Tabak, 2019; Demir, Yücesoy and Serttaş, 2020; Erdamar and Akpınar, 2020; Erdem and Eğmir, 2018; Gömleksiz and Erdem, 2018; Kana, Aşçı, Zorlu Kana, and Elkıran, 2018; Şahin and Aşkın Tekkol, 2023) and teachers (Aslan, 2019; Aslan and Gürlen, 2019; Atlı, Kara and Mirzeoğlu, 2021; Barut and Gündoğdu, 2023; Berkant and Mansuroğlu, 2023; Demir and Toraman, 2021; Güneş Şinego and Çakmak, 2021; Kahramanoğlu, 2019; Sarıca, 2021; Yar Yıldırım and Dursun, 2019; Yılmaz and Kahramanoğlu, 2021) are preferred as the sample. When the literature on CL is examined, the scarcity of mixed-method studies on the subject is striking (Aygün, 2022; Bayrı, 2022; Keskin, 2020). There is no mixed method research examining the CL of secondary school instructors in the literature. This study is expected to fill this gap in the literature.

As the implementation of the curriculum depends on the knowledge and ability of the teachers to comprehend and implement the program, determining the CL levels of the teachers working in the field is very essential to make deductions about the quality of education. Departing from this viewpoint, this study seeks to identify teachers' CL levels in Kayseri's public secondary schools. In relation to the purpose of the study, the researcher will search for responses to the following questions:

1-What is the curriculum literacy level of secondary school teachers?

2-Do the teachers' curriculum literacy levels differ according to their

a) years of service in the profession
b) type of school graduated
c) the branch?

3-What are the teachers' views on curriculum literacy?

Method

Research Design

A mixed method was employed in the present study, conducted to examine the CL levels of secondary school instructors concerning some variables. The mixed method uses the practices of both "qualitative and quantitative research" designs. It is a kind of research which compounds elements of qualitative and quantitative research models (Johnson, Onwuegbuzie, & Turner, 2007, p. 123; Johnson, & Onwuegbuzie, 2004, p. 17). In the present research, "explanatory sequential design", was employed among the mixed method research designs. The basic logic behind this design is that "qualitative data" are used in a way to help explain "quantitative results" (Creswell & Plano Clark, 2011). Explanatory sequential design research consists of two stages: first quantitative data and then, qualitative data are collected and analyzed (Harwell, 2011). Priority is usually given to quantitative data, and findings gathered from both "qualitative and quantitative data" are combined during the interpretation stage of the research (Creswell, 2012, p.542). In the quantitative part of the study, the survey model was preferred. Survey studies describe existing situations or events as they are, without making any changes (Tuncer, 2020). In the research, a case study design was used in the qualitative part. The case study is carried out in a natural environment and provides a holistic interpretation of the events that are the subject of the study (Yıldırım & Şimşek, 2011, p.277).

After the quantitative data were collected, the researcher conducted semi-structured interviews with secondary school teachers. The purpose of the semi-structured interview technique is to determine the parallelism and difference between the interviewees' information and make comparisons accordingly. The researcher prepares the interview questions in advance, providing partial flexibility to the interviewees during the interview and allowing the questions to be rearranged and discussed (Ekiz, 2003, p. 62).

Universe and Sample / Study Group

A sample and study group were formed to collect quantitative and qualitative data. The research population consists of teachers working in secondary schools in 5 central districts of Kayseri (Melikgazi, Talas, Kocasinan, İncesu, Hacılar). Since it is impossible to reach the whole universe in terms of cost, labour and time, it was decided to determine a sample representing the universe. The sample was selected using "simple random sampling". Simple random sampling is a method in which all units in the universe have an equal and independent chance of being selected as a sample (Büyüköztürk et al., 2011, p. 88). In the 2021-2022 academic year, 5703 teachers are serving at secondary schools in 5 central districts in Kayseri province (Akman, Özdemir, & Koca, 2021). Yazıcıoğlu and Erdoğan (2004, p. 48) calculated that for a sample of this number, at least 278 people should be reached at 5% sampling error. Considering this calculation, 504 participants took part in the study. The demographic features of the participants from whom the quantitative data of the research were collected are given in Table 1.

Table 1. *Demographic characteristics of the participants*

		f	%
Gender	Female	324	64,3
	Male	180	35,7
Years of Experience	1-5 years	28	5,6
	6-10 years	115	22,8
	11-15 years	103	20,4
	16-20 years	106	21,0
	21-25 years	85	16,9
	26 years and above	67	13,3
Branch	Mathematics	93	18,5
	Turkish	88	17,5
	English	68	13,5
	Social sciences	58	11,5
	Science	57	11,3
	Education of religion and ethics	38	7,5
	Physical education	29	5,8
	Technology design	26	5,2
	Art	17	3,4
	Information technologies	16	3,2
	Music	14	2,8
Undergraduate Program	Faculty of education	380	75,4
	Faculty of science andlLiterature	99	19,6
	Others	25	5,0
Total		504	100

As seen in Table 1, most participants were women (64.3%) and teachers with a seniority of 6-10 years (22.8%). Looking at the branches, mathematics teachers (18.5%) and Turkish teachers (17.5) mostly participated in the research. Most of the secondary school teachers participating in the research graduated from the faculty of education (75.4%), and only 5% graduated from other faculties (Faculty of Fine Arts and Faculty of Theology). The research study group consisted of 21 teachers from different branches, determined with the purposive sampling method. The demographic features of the participants are given in Table 2.

Table 2. *Demographic characteristics of the interviewed participants*

Code	Gender	Age	Educational statues	Branch	Undergraduate Program
T1	Male	31	Undergraduate	Physical Education	Faculty of Education
T2	Female	34	Undergraduate	Social sciences	Faculty of Education
T3	Male	38	Postgraduate	Mathematics	Faculty of Education
T4	Female	39	Postgraduate	Mathematics	Faculty of Education
T5	Female	42	Postgraduate	English	Faculty of Education
T6	Male	55	Postgraduate	Social sciences	Faculty of Languages and History-Geography
T7	Male	43	Undergraduate	Science	Faculty of Education
T8	Male	38	Postgraduate	Turkish	Faculty of Education
T9	Male	41	Undergraduate	Information technologies	Faculty of Education
T10	Female	37	Undergraduate	English	Faculty of Education
T11	Female	45	Undergraduate	Art	Faculty of Education
T12	Female	46	Postgraduate	Social Sciences	Faculty of Science and Literature
T13	Male	44	Undergraduate	English	Faculty of Science and Literature
T14	Male	27	Undergraduate	Education of religion and ethics	Faculty of Education
T15	Female	37	Postgraduate	Turkish	Faculty of Science and Literature
T16	Female	41	Undergraduate	English	Faculty of Science and Literature
T17	Female	33	Undergraduate	Science	Faculty of Education
T18	Male	26	Postgraduate	English	Faculty of Education
T19	Female	33	Undergraduate	Science	Faculty of Science and Literature
T20	Female	40	Postgraduate	Turkish	Faculty of Education
T21	Male	43	Undergraduate	Social sciences	Faculty of Education

According to Table 2, 11 of the interviewed teachers were male and 10 were female. 5 teachers were English teachers, 4 were social studies teachers, 3 were science teachers, 3 were Turkish, 2 were mathematics, 1 was physical education, 1 was computer, 1 was visual arts and 1 was a religious culture and moral knowledge teacher. The ages of the teachers ranged from 26 to 55. 12 of the interviewed teachers were undergraduate and 9 graduates. 15 of the teachers were graduates of the Faculty of Education, 5 were graduates of the faculty of science and literature, and 1 was a graduate of the Faculty of Language, History and Geography.

Data Collection Tools

Quantitative data in the research were collected with the "Curriculum Literacy Scale (CLS)" developed by Bolat (2017). The scale consists of 2 sub-dimensions. There are 29 items in total in the reading (15) and writing (14) sub-dimensions. The scale's Cronbach-Alpha value was calculated at 0.888 for the reading sub-dimension, 0.907 for the writing sub-dimension and 0.940 for the entire scale. Qualitative data in the research were collected with a semi-structured interview form prepared by the researcher. The relevant literature was examined before this form was prepared and 11 questions were prepared. Then, three experts were consulted to ensure internal validity. Necessary corrections were made in the interview form in line with the experts' opinions. A pilot application of the form was conducted with three teachers (Turkish, English and Mathematics teachers) apart from the study group, and the clarity of the questions was tested. As a result of the data obtained from the pilot application, 5 questions were included in the final version interview form.

Data Collection Process

The researcher collected the quantitative data of the study. It took an average of 5 minutes for the teachers to answer the scale. The researcher also conducted interviews regarding the qualitative data of the study. Using the prepared interview form, interviews were conducted in an environment where the teacher and the researcher were alone. Each interview lasted between 25-30 minutes. The teachers' answers, whose opinions were taken in written form, were read to the teachers, and the interview ended after their approval.

Analysis of Data

The SPSS package program was used in the analysis of the data. The arithmetic means and standard deviations of the total scale and sub-dimensions were calculated. The skewness and kurtosis values of the data obtained from the scale were examined and it was seen that these values were between +1/-1. The fact that the skewness and kurtosis are within these limits is an indication of the normal distribution (Büyüköztürk et al., 2011, p. 40). Since the mean, median and mode of the scale were close to one another, it was decided that the data were normally distributed for this study and parametric tests were used to analyse the data. In the study, the calculations of the CL level of the teachers according to the branch, the type of school they graduated from and seniority variables were made with ANOVA. The test results were evaluated at the 95% confidence interval at the $p<0.05$ significance level. Content analysis and descriptive analysis methods were employed in the qualitative data analysis. Content analysis is a systematic, repeatable technique in which some words of a text are summarized with smaller content categories with coding based on certain rules (Büyüköztürk et al., 2011, p. 269). Content analysis scans the text for repetitive words or themes (Patton, 2001/2014, p. 453). The data obtained in the descriptive analysis are summarized and interpreted according to the predetermined themes. In descriptive analysis, direct quotations are frequently used to reflect the views of the interviewees (Yıldırım & Şimşek, 2011, p. 224). In order to keep the participants confidential, each teacher was given codes as T1, T2…. During the content analysis, the researcher and another expert in the field analyzed and coded the data separately from each other. After the analyzes were completed, the consistency between the codings made by the researchers was calculated according to Miles and Huberman (1994), and it was determined that the consistency between the coders was 82%. According to Yıldırım and Şimşek (2011), the consistency of researchers' opinions above 70% is sufficient for reliability. Accordingly, it can be stated that reliability among the coders was ensured in the analysis of qualitative data in the present study.

Ethical Permits of Research

In this study, all the rules specified to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were complied with. None of the actions specified under the heading "Actions Contrary to Scientific Research and Publication Ethics", which is the second part of the directive, have been taken.

Ethics Committee Permission Information:

Name of the committee that made the ethical evaluation = Erciyes University Social Sciences Human Research Ethics Committee.

Date of ethical review decision=25.04.2023

Ethics assessment document issue number=166

Findings

Findings Related to the 1st Sub-Problem

In the research, in order to test the first sub-problem, which was stated in the form of "What is the curriculum literacy level of secondary school teachers?", "Curriculum Literacy Scale" was applied to the teachers and the findings are presented in Table 3.

Table 3. *CL levels of secondary school teachers*

Dimension	N	$\bar{x}$	S
Total Scale	504	4,1663	,57258
Reading Dimension	504	4,2811	,56760
Writing Dimension	504	4,0339	,69351

Table 3 showed that the CL perceptions of secondary school teachers were high ($\bar{x}$=4.1663). It was determined that the participants had CL perceptions at the level of "I agree" in the reading sub-dimension and at the level of "I agree" in the writing dimension.

Findings Related to the 2nd Sub-Problem

In the second sub-problem of the research, CL levels of secondary school teachers were examined according to seniority, undergraduate program and branch variables, and it was determined whether they showed a significant difference according to these variables.

Examination of CL Levels of Secondary School Teachers According to the Variable of Seniority

6 categories were created for the variable of seniority and the data of secondary school teachers according to this variable were analyzed by one-way analysis of variance. Descriptive statistics regarding the seniority variable of secondary school teachers are presented in Table 4 and ANOVA results in Table 5.

Table 4. *Descriptive statistics of secondary school teachers' curriculum literacy levels by seniority variable*

	Years of seniority	N	$\bar{x}$	S
Total Scale	1-5 years	28	4,1596	,44058
	6-10 years	115	4,0969	,53227
	11-15 years	103	4,1898	,62907
	16-20 years	106	4,0947	,65957
	21-25 years	85	4,2619	,49362
	26 years and above	67	4,2439	,52975
Reading Dimension	1-5 years	28	4,2417	,43703
	6-10 years	115	4,2301	,52361
	11-15 years	103	4,2689	,61466
	16-20 years	106	4,2252	,65043
	21-25 years	85	4,4236	,43670
	26 years and above	67	4,3112	,60532
Writing Dimension	1-5 years	28	4,0659	,53855
	6-10 years	115	3,9431	,69799
	11-15 years	103	4,0986	,74700
	16-20 years	106	3,9441	,78054
	21-25 years	85	4,0754	,63333
	26 years and above	67	4,1665	,55577

When Table 4 was examined, it was seen that all teachers had a high level of CL regardless of their seniority. Considering the total scale scores, it was observed that the educators of 21-25 years had the highest mean ($\bar{x}$= 4.2619), and the lowest mean was the teachers of 16-20 years ($\bar{x}$= 4.0947). In the reading dimension, teachers of 21-25 years ($\bar{x}$=4.4436) had the highest mean, while teachers of 16-20 years ($\bar{x}$=4.2252) had the lowest mean. In the writing dimension, teachers working for more than 21 years ($\bar{x}$=4.1665) had the highest mean, while teachers working for 16-20 years ($\bar{x}$=3.9441) had the lowest mean. The variance analysis results regarding the differentiation of teachers' CL levels according to the variable of seniority are given in Table 5.

Table 5. *ANOVA results of secondary school teachers' cl levels by seniority variable*

		Sum of Squares	df	Mean Square	F	P
Total Scale	Between Groups	2,336	5	,467	1,431	,211
	Within Groups	162,571	498	,326		
	Total	164,907	503			
Reading Dimension	Between Groups	2,477	5	,495	1,546	,174
	Within Groups	159,574	498	,320		
	Total	162,051	503			
Writing Dimension	Between Groups	3,585	5	,717	1,498	,189
	Within Groups	238,336	498	,479		
	Total	241,921	503			

When Table 5 was examined, the F value calculated for teachers' CL levels ($F_{(5-498)}$=1,431, p>.05) showed that there was no significant difference. For the reading sub-dimension, it was determined that the mean values of all teachers were above 4 and were very close to each other. Thus, it was observed that the CL levels did not differ significantly among secondary school educators according to seniority ($F_{(5-498)}$=1,546, p>.05). When the writing sub-dimension was examined, although the CL levels of educators with 6-10 years of experience ($\bar{x}$=3.9431) and 16-20 years of experience ($\bar{x}$=3.9441) were slightly lower than the others, this difference was not found significant ($F_{(5-498)}$= 1,498, p>.05). These findings suggest that the variable of seniority does not affect the CL level.

Examination of Secondary School Teachers' CL Levels According to the Graduated School Variable

ANOVA test was conducted to determine the CL levels of secondary school teachers according to the graduated school variable and the data obtained are presented in Table 6 and Table 7.

Table 6. *Descriptive statistics of secondary school teachers regarding the graduated school variable*

	Groups	N	$\bar{x}$	S
Total Scale	Faculty of Education	380	4,1472	,59045
	Faculty of Science and Literature	99	4,2493	,48597
	Others	25	4,1271	,60461
Reading Dimension	Faculty of Education	380	4,2611	,58077
	Faculty of Science and Literature	99	4,3680	,50343
	Others	25	4,2400	,59286
Writing Dimension	Faculty of Education	380	4,0159	,72009
	Faculty of Science and Literature	99	4,1127	,56637
	Others	25	3,9969	,74131

When Table 6 was examined, it was seen that the teachers who graduated from the Faculty of Science and Literature had the highest mean in the reading, writing sub-dimensions and in the total scale. The lowest mean belonged to teachers who graduated from other school types. The ANOVA results

regarding the differentiation of CL levels of teachers according to the type of school they graduated from are given in Table 7.

Table 7. *The results of ANOVA regarding the CL levels of the teachers according to the type of school they graduated from*

		Sum of Squares	df	Mean Square	F	P
Total Scale	Between Groups	,859	2	,430	1,312	,270
	Within Groups	164,047	501	,327		
	Total	164,907	503			
Reading Dimension	Between Groups	,942	2	,471	1,465	,232
	Within Groups	161,109	501	,322		
	Total	162,051	503			
Writing Dimension	Between Groups	,772	2	,386	,802	,449
	Within Groups	241,149	501	,481		
	Total	241,921	503			

When Table 7 was examined, the F value calculated for teachers' CL ($F_{(2\text{-}501)}$= 1,312, p>.05) revealed no significant difference. In the reading sub-dimension, it was observed that CL levels did not differ significantly among secondary school teachers according to the type of school they graduated from ($F_{(5\text{-}498)}$= 1,546, p>.05). It was observed that the average values of all teachers were above 4 and were very close to each other. In the writing sub-dimension, although the CL level of teachers who graduated from other school types ($\bar{x}$=3.9969) is slightly lower than those of education faculty ($\bar{x}$=4.0159) and faculty of science and literature graduates ($\bar{x}$=4.1127), this difference was not found statistically significant. ($F_{(5\text{-}498)}$=,802, p>.05). These results can be interpreted as the school type variable does not affect the CL.

Examination of the CL Levels of Secondary School Teachers According to the Branch Variable

Teachers from 11 different branches working at secondary schools participated in the research and their CL levels were examined by ANOVA according to the branch variable. Descriptive statistics of secondary school teachers regarding the branch variable are given in Table 8 and ANOVA results are given in Table 8.

Table 8. *Descriptive statistics of secondary school teachers regarding the branch variable*

	Branch	N	x̄	SS
Total Scale	Science	57	4,2011	,52418
	Mathematics	93	4,2221	,48421
	Social sciences	58	4,2106	,54013
	Music	14	4,2755	,63833
	English	68	4,1206	,55574
	Turkish	88	4,0349	,73014
	Technology design	26	4,3393	,50581
	Physical education	29	4,2259	,45183
	Art	17	4,1597	,61615
	Education of religion and ethics	38	4,0547	,59456
	Information technologies	16	4,2612	,50889
Reading Dimension	Science	57	4,2912	,53402
	Mathematics	93	4,3441	,46549
	Social sciences	58	4,3529	,54946
	Music	14	4,3476	,47298
	English	68	4,2997	,50176
	Turkish	88	4,1015	,76714
	Technology design	26	4,4436	,50065
	Physical education	29	4,3048	,49720
	Art	17	4,2196	,50814
	Education of religion and ethics	38	4,2202	,56460
	Information technologies	16	4,3708	,52997
Writing Dimension	Science	57	4,0972	,61238
	Mathematics	93	4,0813	,64402
	Social sciences	58	4,0464	,65509
	Music	14	4,1923	,90251
	English	68	3,9140	,72509
	Turkish	88	3,9580	,80364
	Technology design	26	4,2189	,63793
	Physical education	29	4,1353	,51873
	Art	17	4,0905	,81237
	Education of religion and ethics	38	3,8644	,71926
	Information technologies	16	4,1346	,52360

According to Table 8, when the mean scores for the whole scale were examined based on branches, it was detected that Technology design teachers (x̄=4.3393) had the highest mean and Turkish teachers (x̄=4.0349) had the lowest mean. Similarly, Technology design teachers (x̄=4.4436) had the highest mean and Turkish teachers (x̄=4.1015) had the lowest mean in the reading dimension. In the writing dimension, Technology design teachers (x̄=4.2189) had the highest average, while Education of Religion and Ethics teachers (x̄=3.8644) had the lowest average. The variance analysis results regarding the differentiation of teachers' CL levels according to the branch variable are presented in Table 9.

Table 9. *The ANOVA results regarding the CL levels of the teachers according to the branches*

		Sum of Squares	df	Mean Square	F	P
Total Scale	Between Groups	3,800	10	,380	1,163	,314
	Within Groups	161,106	493	,327		
	Total	164,907	503			
Reading Dimension	Between Groups	4,634	10	,463	1,451	,155
	Within Groups	157,417	493	,319		
	Total	162,051	503			
Writing Dimension	Between Groups	4,778	10	,478	,993	,448
	Within Groups	237,143	493	,481		
	Total	241,921	503			

As seen at Table 9, there was no significant difference between the curriculum literacy levels of secondary school teachers according to the branch variable (($F_{(10-503)}$= 1,163, p>.05). The branch groups didn't differ from each other in the reading sub-dimension ($F_{(10-503)}$= 1,451, p>.05) and the writing sub-dimension ($F_{(10-503)}$= ,993, p>.05).

Findings Related to the Third Sub-Problem

The third sub-problem of the research was "What are the teachers' views on curriculum literacy?" For this purpose, content analysis and descriptive analysis were made, and the findings were tabulated.

Secondary School Teachers' Views on "Curriculum Literacy"

Within the scope of this category, the teachers were asked the question, "What does the term curriculum literacy suggest to you?". The answers are presented in Table 10.

Table 10. *Teachers' views on "Curriculum Literacy*"

Thematic Codes	Participants	f
Understanding, interpreting and application skills	T4, T6, T7, T11, T13, T15, T18, T19, T21	9
Having knowledge of the curriculum	T1, T2, T3, T5, T10, T12, T15	7
Being knowledgeable about the components of the curriculum	T3, T4, T8	3
I don't know	T16, T9, T20	3
Ability to criticize the curriculum	T1	1
Analyzing the curriculum	T14	1
Acting like an expert	T15	1
Content list	T17	1

As seen in Table 10, when teachers were asked what they understood from the term "Curriculum literacy" the teachers mostly expressed their ideas (f=9) as "Understanding, interpreting and application skills". On this subject, T7 said, "*The interpretation and prediction of the educational program and its transfer to the educational environment includes curriculum literacy.*" 6 teachers regarded CL as "Having program knowledge". On this subject, T5 said, *"When curriculum literacy is mentioned, I think of teachers knowing the curriculum they implement. Teachers should understand the program of their branch and be able to reflect it in their classroom practices as planned."* T17, who described the curriculum literacy as the distribution of topics, expressed his opinion on CL as "The ability to arrange the distribution of the topics". T15 said, "*We can say that CL is having curriculum knowledge, using it, transferring it to the environment and acting as if we are an expert on that program.*" 3 of the teachers expressed frankly that they didn't know anything about CL.

Secondary School Teachers' Knowledge about the "Objectives"

Within the scope of this category, the teachers were asked what they knew about the objective component of the curriculum. The answers are presented in Table 11.

Table 11. *Coding of teachers' opinions on "objectives"*

Thematic Codes	Participants	f
Qualities to be acquired by the student	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T13, T14, T17, T16, T18, T19, T20, T21	18
The answer to the question "Why should we teach?"	T11, T15	2
Attainable qualifications	T15	1
I don't know	T12	1

As seen in Table 11, 18 teachers stated that the objectives are "The qualities that the students should acquire". In this regard, T3 said, *"Objectives are the desired features that can be gained by students through education"*. In contrast, T8 said *"The objectives represent every skill, behavior and value that is desired to be acquired by the students related to that course"*. 2 teachers said that the objectives are the answer to the question "Why we should teach". One of the participants expressed that he had no information about "objectives".

Secondary School Teachers' Knowledge about the "Content"

Within the scope of this category, the question "What do you know about the content element of the curriculum?" has been asked to the secondary school teachers and the answers are presented in Table 12.

Table 12. *Coding of teachers' opinions on "content"*

Thematic codes	Participants	f
The answer to the question what we can teach	T1, T3, T7, T10, T15, T17, T18, T19	8
Units and topics	T13, T14, T16, T18, T19, T21	6
Knowledge about the subject area	T4, T5, T8, T9, T12	5
The knowledge, skills, attitudes, etc. to be taught, gained	T2, T10, T11, T20	4
Elements that enrich the teaching	T6	1

As seen in Table 12, 8 teachers stated that the content answered the question "*What we can teach"*. T3 regarded content as *"What should be in teaching activities and what should be taught to students"*. At the same time, T7 said that content is "*All of the knowledge, skills, attitudes, behaviours and practices that are within the scope of the curriculum objectives and that determine what should be taught."* 6 teachers stated that the content consists of units and topics and similarly T13 said that "*In short, content is the units and subjects to be explained. The content is about the aims of the curriculum. The contents are prepared following the educational philosophy*." T16 said that "*The content element covers all that we teach while applying the curriculum. It is a collection of all information that helps students learn: Units, themes, learning areas, topics etc."* 4 teachers said that the content is knowledge about the subject area. T4 expressed his ideas on this subject by saying "*It is knowledge about the subject area. Although the framework is determined in the curriculum, the content is organized under the control of the teacher, sorted, and the questions to be solved are determined.*" T6 emphasized that the content is the elements that enrich the meaning by saying "*The elements that will enrich the teaching by addressing the topics are our content items. However, they should also be suitable for student levels, listed from simple to difficult, from local to general."*

Secondary School Teachers' Knowledge about the "Instructional methods"

Within the scope of this category, the teachers were asked, "What do you know about Instructional methods component of the curriculum?" The answers given by the teachers regarding this question are presented in Table 13.

Table 13. *Coding of teachers' opinions on "instructional methods"*

Thematic Codes	Participants	f
Teaching-learning process	T1, T2, T3, T5, T7, T8, T9, T10, T13, T16, T17, T20, T21	13
Utilizing teaching methods and techniques	T1, T4, T5, T10, T11, T12, T13, T15, T17	9
The answer to the question how to teach	T4, T13, T15, T19	4
Instruction	T1	1
Planning the time	T6	1
The actualization of learning	T14	1
The use of materials	T15	1
Everything in the class	T18	1

As seen in Table 13, 9 teachers stated that Instructional method means *"Utilizing teaching methods and techniques"*. T1 stated his opinion: "Various teaching methods and techniques are used for the students to achieve the objectives and the teaching process takes place here". 8 teachers emphasized that the Instructional method is the "Teaching and learning process", that is, the teaching process, and on this subject, T21 said "*Learning and Instructional methods can be defined as the teaching process that aims to provide knowledge, skills, attitudes and behaviours determined within the curriculum. During this process, some learning-teaching activities are carried out."* He mentioned that both the teaching process and the learning-teaching activities are carried out in this process. According to T15, instructional methods include both the use of teaching-learning methods, the answer to the question of how to teach and the use of materials in the process by saying, "*We should be able to find the answers to the questions of how and with what we will teach. Determining what kind of strategy, method and technique we will use is very important. In addition, determining which tools, technology or material we will use directly affects the learning process.*"

Secondary School Teachers' Knowledge about the "Evaluation"

Within the scope of this category, the researcher asked, "What do you know about the evaluation component of the curriculum?" and the answers are presented in Table 14.

Table 14. *Coding of teachers' opinions on "assessment"*

Thematic Codes	Participants	f
Determining the achievement level of the goals	T1, T2, T3, T5, T7, T8, T10, T11, T13, T15, T16, T18, T19, T21	14
Determining the lack of knowledge and false learning	T2, T6, T9, T20	4
Exams	T12, T17	2
Decision making	T13, T14	2
Determining the efficiency of the curriculum	T4, T18	2
The answer to the question "how much"	T4	1

As seen in Table 14, 15 teachers stated that evaluation is "determining the achievement level of the goals". T1 regarded evaluation as "*The section where we check how much of the determined objectives are achieved at the end of the learning-teaching process*." 4 teachers defined the evaluation as "*Determining the lack of knowledge and false learning*". T14 defined evaluation as "*Decision-making process according to a criterion/criteria after measuring desired qualities.*" T4 said, "*The last element of the program is evaluation. It is the answer to the question "How much". It is done systematically to determine the effect, value and adequacy of the process."* and thus he identified determination the Curriculum efficiency as one of the roles of evaluation.

Discussion and Conclusion

In the study, the curriculum literacy levels of the teachers working at secondary schools were examined in terms of various variables. In line with the first sub-problem of the research, CL levels of the secondary school teachers were examined, and it was concluded that the CL levels of the secondary school teachers were high. It can be said that the secondary school teachers participating in the research consider themselves to be highly curriculum literate. From this point of view, it can be stated that secondary school teachers have mastery of the four curriculum elements, namely the objectives, content, instructional methods and evaluation dimensions. It is essential for teachers, who are the curriculum implementers, to see themselves as competent about the programs. When the literature is examined, studies with similar results are encountered (Aslan, 2019; Aslan & Gürlen, 2019; Atlı, Kara & Mirzeoğlu, 2021; Aygün, 2019; Bayrı, 2022; Barut & Gündoğdu, 2023; Boncuk, 2021; Çetinkaya & Tabak, 2019; Dağ, 2021; Demir & Toraman, 2021; Erdem & Eğmir, 2018; Gömleksiz & Erdem, 2018; Güneş Şinego & Çakmak, 2021; Kale, 2022; Kana et al., 2018; Sarıca, 2021; Sural & Dedebali, 2018; Şahin & Aşkın Tekkol, 2023; Yılmaz & Kahramanoğlu, 2021). However, the results of some studies in the literature do not show similarity with the results of this study. Kahramanoğlu (2019), in his study with teachers working at different levels, revealed that teachers' CL perceptions are at a moderate level. Yıldız (2019) and Kızılaslan Tunçer and Şahin (2019) concluded that the participants were moderately literate and knowledgeable in the studies they conducted with pre-service teachers.

According to the research, it was concluded that teachers had curriculum literacy perceptions at the level of "completely agree" in the reading sub-dimension and at the level of "agree" in the dimension of writing. According to Erdem and Eğmir (2018), the "reading" dimension includes the competencies to understand and interpret the elements of the program, while the "writing" dimension includes the skills to design tools suitable for the "objectives, content, learning-teaching processes and measurement-evaluation" steps. The mean on the reading sub-dimension was higher than on the writing sub-dimension. Çetinkaya and Tabak (2019), Erdem and Eğmir (2018) and Yıldız (2019) found that the reading dimension had a higher mean than the writing dimension in their studies. These findings can be interpreted as the teachers' knowledge about the program is higher than their application knowledge. Contrary to the findings of this study, Ekawati (2016) determined in his research that teachers have a lack of knowledge at both conceptual (reading dimension) and practical (writing dimension) levels.

Within the scope of the second sub-problem of the research, it was examined whether the literacy levels of the secondary school teachers differed according to the variables of seniority, the type of school they graduated from and the branch. According to the research results, it was determined that all teachers, regardless of their seniority, had a high level of CL. In light of these data, it can be said that the variable of seniority does not affect the CL level. A thorough review of the literature has revealed studies with similar results (Aslan & Gürlen, 2019; Boncuk, 2021; Demir & Toraman, 2021; Güneş Şinego & Çakmak, 2021; Kahramanoğlu, 2019; Kale, 2022). In the study, when the total scale scores were examined, it was seen that the teachers of 21-25 years had the highest mean and the teachers of 15-20 years had the lowest average. Superfine (2008) stated that experienced teachers adhere to their own experiences. Kauffman, Johnson, Kardos, Liu, and Peske (2002) revealed that the more experienced teachers become, the less they need the programs. Bayrı (2022) concluded in his study that as the years of professional seniority of special education teachers increase, their CL levels increases. Sarıca (2021)

determined that teachers with a seniority of 21 years and above had a higher level of curriculum literacy than teachers with a seniority of 1-10 years. Barut and Gündoğdu (2023) concluded in their study that teachers with a professional seniority of 6-10 years had a lower level of CL than teachers with a professional seniority of 11-15 years and more than 25 years. Dağ (2021) concluded that the CL levels of teachers with seniority between 1-5 years were lower than those between 11-15 years and 16-20 years. Boncuk (2021), on the other hand, concluded that CL levels of the teachers who worked in their first five years and over twenty years in their profession were high. Similarly, Atlı, Kara and Mirzeoğlu (2021), in their study with physical education teachers, determined that teachers with 1-5 years of seniority had the highest curriculum literacy perception. According to Özkan (2016), as the seniority of the teachers increases, their knowledge and awareness decrease. The study conducted by Cornett, Yeotis, and Terwilliger (1990) concluded that as the seniority of the teachers increased, they consulted less to the program and their abilities in the "writing" dimension increased by playing the role of program developer.

According to the results of the study, it was determined that the school type variable did not affect curriculum literacy. Similar to this result, Demir and Toraman (2021) and Aslan and Gürlen (2019) found no difference in their study between the faculty the teachers graduated from and their perceptions of CL. The education courses in the Faculty of Education and in the pedagogical formation programs taken by science and literature graduates have almost the same content. However, education is spread over a longer period in education faculties, success criteria are higher, relatively more comprehensive, and the opportunity to apply the developed skills is more. For this reason, education faculties allow writing skills to be developed more (Erdem & Eğmir, 2018). While this expectation was in this direction, it was determined in the study that the teachers who graduated from the faculty of science and literature had the highest average in the reading and writing sub-dimensions of the whole scale. At the same time, the lowest means belonged to the teachers who graduated from other school types. Aslan and Gürlen's (2019) research revealed a different result. The researchers determined that there was no difference between the graduates of the faculty of education, science and literature and other school types at the total CL level. Still, there was a significant difference in favour of the teachers who graduated from other faculties in the planning dimension. In their study conducted with the prospective teachers, Gömleksiz and Erdem (2018) concluded that the CL level of the education faculty students was significantly different from those enrolled in the formation education program in favor of the education faculty.

According to the results of the study, it was determined that branch groups didn't differ from each other in terms of CL levels. The branches of secondary school teachers do not affect their curriculum literacy. Literature review has revealed studies with similar results (Aslan, 2019; Aslan & Gürlen, 2019; Boncuk, 2021; Demir & Toraman, 2021; Güneş Şinego & Çakmak, 2021; Kahramanoğlu, 2019; Kale, 2022). In the study, although there was no significant difference between the teachers based on the branch, when the total means of the scale were examined, it was seen that the technology design teachers had the highest average and the Turkish teachers had the lowest average. Güneş Şinego and Çakmak (2021) concluded that the Information Technologies and Software branch had the highest average among the branches in their study. In their study with Turkish teachers, Kırmızı and Akkaya (2009) determined that teachers did not consider themselves sufficient in practice. In the study conducted by Kana, Aşçı, Zorlu Kana, and Elkıran (2018), it was concluded that Turkish teacher

candidates had sufficient knowledge about the elements of the education program. Similarly, Gömleksiz and Erdem (2018) concluded in their study that Turkish teacher candidates had high CL levels.

In the research, the results obtained from the qualitative data related to the third sub-problem, expressed as "What are teachers' views about curriculum literacy?" have been examined. First of all, teachers were asked what they understood from the term curriculum literacy. Teachers generally regarded CL as understanding, interpreting and being able to apply the curriculum and having knowledge of the curriculum. It can be said that teachers' knowledge of curriculum literacy is sufficient. Similarly, Bayrı (2022) concluded in his study that teachers' knowledge of the curriculum was sufficient. Aygün (2022) concluded that the knowledge level of special education teachers about CL was low and moderate. The research results showed that the knowledge levels of the educators about the four components of the curriculum (objectives, content, instructional methods, evaluation) were sufficient.

When the quantitative and qualitative data were examined, it was identified that there was a parallelism in the results and that the teachers were curriculum literate. From this point of view, it has been seen that the qualitative results of the research support the quantitative results.

Recommendations

This study examined CL levels of secondary school teachers in Kayseri. Similar studies can be conducted with different school grades and in different regions of Türkiye. CL is one aspect of the implementation of the curriculum. Further studies can be conducted to determine to what extend the curriculum is implemented in the classroom by the curriculum literate teachers. There are very few qualitative or mixed method studies on the subject. More studies can be conducted employing qualitative and mixed method. The researcher can develop the scale used in the research or similar studies can be conducted using different scales. Similar studies can be carried out with teachers in different branches, as well with pre-service teachers studying in different fields. Since the teachers' curriculum literacy levels were found a bit lower in the writing dimension in the present study, in-service trainings can be organized for teachers on designing tools suitable for the four curriculum elements.

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BIOGRAPHICAL NOTES

Contribution Rate of Researchers

Author 1: 100%

Conflict Statement

There is no material or individual organic connection with the people or institutions involved in the research and there is no conflict of interest in the research.

Genişletilmiş Türkçe Özet

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Ortaokul Öğretmenlerinin Program Okuryazarlık Düzeylerinin İncelenmesi: Karma Yöntem Araştırması

Giriş

Eğitim programları öğretim etkinlikleri için yol gösterici bir haritadır; çünkü öğretim için hedeflenen sonuçları, bu hedeflere ulaşmak için belirlenen içeriği, öğrenme-öğretme durumlarını ve uygun ölçme araçlarını programlar belirler (Çetinkaya & Tabak, 2019). Bu sebeple öğretim sürecinden sorumlu olan öğretmenlerin en değerli rehberi programlarıdır. Ancak Cuban (1993) bir öğretmenin uygulamada öğrettikleri ile resmi olarak uygulanması amaçlanan olan programın farklı olabileceğini belirtmektedir. Uygulanan program, öğretmenlerin deneyimlerinden, tutumlarından, yeterliliklerinden ve resmi programı yorumlamalarından kaynaklanan bir uygulama sürecidir (Tikkinena, Korkeamäki, & Dreher, 2020). Öğretmenler uygulama bilgi ve becerileri ile programlarda sınıfa uygun uyarlamalar yaparlar (Duffee & Aikenhead, 1992). Her ne kadar merkezden tek bir program gönderilip uygulanması beklense de çoğu öğretmen ders içeriği kendisi planlamakta ve bu durumun sonucunda farklı sınıflardaki öğrenciler farklı uygulamalarla karşılaşmaktadırlar (Steiner, 2018). Öğretmenlerin öğretimin her aşamasında mesleki bilgilerini kullanarak kararlar alması gerekir (Duffee & Aikenhead, 1992) Her öğretmen bu karar aşamasında kendi bilgi ve becerisin kullanır ki bu durum programların uygulanışındaki farkların temel sebebidir. Eğer bir öğretim programı etkili uygulanmaz ise planlama ve geliştirme sürecinde harcanan tüm çabalar boşa gitmiş olacaktır (Ejike, 2018, s. 64).

Program okuryazarlığı kavramı ilk olarak Akınoğlu ve Doğan'ın (2012) "Eğitimde Program Geliştirme Alanına Yeni Bir Kavram Önerisi: Program Okuryazarlığı" isimli çalışmalarında kullanılmıştır. Araştırmacılar, öğretmenlerin programları uygularken programı anlamaları, programa karşı tutumları ve uygulamaya dönüştürebilme becerileri nitelemek için de "program okuryazarlığı" kavramını önermişlerdir (Akınoğlu & Doğan, 2012). Eğitim programı okuryazarlığı, eğitim programının ögeleri olan hedef, içerik, öğrenme öğretme süreçleri ve değerlendirme ile ilgili yeterli bilgiye sahip

olmaktır (Bolat, 2017). "Program okuryazarlığı; öğretmenin eğitim programlarına özgü özelliklerin farkında olması, bu farkındalığı uygulamaya dönük kullanabilmesi, eleştirel bakış açısıyla değerlendirmeler ve yorumlamalar yaparak eğitim programını kendine rehber olarak kullanabilmesidir" (Keskin & Korkmaz, 2021). Program okuryazarlığı, eğitim sürecinde en temel rollerden birini üstlenen öğretmenlerin, işe koştukları programın tüm boyutlarını bilme anlama ve uygulama becerilerini ifade eder (Erdem & Eğmir, 2018). Öğretim programı okuryazarlığı, öğretmenlerin üst düzey zihinsel becerilerle resmi programı anlamlandırma ve çözümleme sürecidir. Çünkü programların öğrenme öğretme sürecine yansıtılmasında temel etken öğretmenlerdir (Kahramanoğlu, 2019). Program okuryazarlığı kavramın "bilgi" ve "beceri" olarak iki gruba ayırmıştır. Bilgi boyutunda öğretmenlerin, "programı anlama, uygulama ve değerlendirme süreçleri" ile ilgili bilgilerinin; beceri boyutunda ise "programın uygulanması ile ilgili öğrenme-öğretme süreçlerinin tasarlanması, uygulanması ve değerlendirilmesi" ile ilgili becerilerin yer aldığını belirtmiştir (Akyıldız, 2020).

Öğretim programları, öğretmenler için en önemli kaynaktır. Bu kaynaktan maksimum seviyede yararlanmak için, öğretmenlerin program okuryazarı olmaları gerekir. Program uygulaması, öğrenci başarısı ve başarısızlığının temeli olduğundan müfredat sürecinin çok önemli bir yönüdür (Odey & Opoh, 2015). Eğitim için tüm koşular ideal olsa bile öğretmenler program uygulama ile ilgili gerekli bilgi ve beceriye sahip değilse istenilen öğretim başarısına ulaşılamaz (Wiles, 2009/2016). Program okuryazarlığı ile ilgili alan yazın incelendiğinde konuyla ilgili karma yöntem çalışmaların azlığı dikkat çekicidir (Keskin, 2020; Aygün, 2022; Bayrı, 2022). Literatürde ortaokul öğretmenlerinin program okuryazarlığını inceleyen herhangibir karma yöntem araştırmasına rastlanmamıştır. Bu araştırmayla literatürdeki bu eksikliğin giderileceği düşünülmektedir. Ayrıca bu araştırmanın sonuçları, öğretmen yetiştirme ve mesleki gelişim konularında alana katkı sağlaması açısından önemlidir. Programların tasarlandığı şekliyle uygulanması öğretmenlerin programı anlama ve uygulama bilgi ve becerisine bağlı iken sahada görev yapan öğretmenlerin program okuryazarlık düzeylerinin belrlenmesi eğitimin kalitesi için oldukça önemlidir.

Bu çalışmanın amacı, Kayseri ilinde resmi ortaokullarda görev yapmakta olan öğretmenlerin program okuryazarlığı düzeylerini bazı değişkenler açısından incelemektir. Çalışmanın amacı doğrultusunda aşağıdaki soruların cevapları aranmıştır:

1-Ortaokul öğretmenlerinin program okuryazarlık düzeyleri nedir?

2-Ortaokul öğretmenlerinin program okuryazarlık düzeyleri arasında

a) meslekteki hizmet yılı

b) mezun olunan okul türü

c) branş değişkenlerine göre anlamlı bir farklılık var mıdır?

3-Öğretmenlerin program okuryazarlığı hakkındaki görüşleri nelerdir?

Yöntem

Bu araştırmada karma yöntemler araştırma tasarımlarından açıklayıcı sıralı tasarım kullanılmıştır. Açıklayıcı sıralı tasarım araştırmaları iki aşamalı bir karma yöntem tasarımıdır. Bu tasarımın tüm amacı, nitel verinin, nicel sonuçları açıklamaya yardım etmesidir (Creswell & Plano Clark, 2011). Araştırmanın nicel bölümünde tarama modeli tercih edilmiştir. Tarama araştırmaları herhangi

bir değişiklik yapmadan, var olan durum veya olayları olduğu şekliyle betimleyen çalışmalardır (Tuncer, 2020, s. 223). Araştırmanın nitel bölümünde durum çalışması deseni kullanılmıştır. Durum çalışması, doğal bir ortam içerisinde gerçekleştirilir ve çalışmaya konu olan olayların bütüncül bir yorumunun yapılmasını sağlar (Yıldırım & Şimşek, 2011, s. 277).

Araştırmada nicel veriler toplandıktan sonra ortaokul öğretmenleriyle yarı yapılandırılmış görüşmeler yapılmıştır. Yarı yapılandırılmış görüşme tekniğinde amaç, görüşülen bireylerin verdikleri bilgiler arasındaki paralelliği ve farklılığı saptamak ve buna göre karşılaştırmalar yapmaktır (Ekiz, 2003, s. 62). Araştırmanın nicel örneklemini "basit seçkisiz örnekleme" yöntemi kullanılarak seçilen 504 ortaokul öğretmeni oluşturmaktadır. Araştırmanın nitel çalışma grubunu amaçlı örnekleme yöntemi ile belirlenen, nicel veri toplama sürecine katılmış, farklı branşlardan 21 öğretmen oluşturmaktadır. Nicel veriler Bolat (2017) tarafından geliştirilen "Eğitim Programı Okuryazarlığı Ölçeği [EPOÖ]" ile toplanmıştır. Ölçek 2 alt boyuttan oluşmaktadır. Okuma (15) ve yazma (14) alt boyutlarında toplam 29 madde bulunmaktadır. Ölçeğin Cronbach-Alfa değeri okuma alt boyutu için 0,888; yazma alt boyutu için 0,907; ölçeğin tamamı için 0,940 olarak hesaplanmıştır. Nitel veriler araştırmacı tarafından hazırlanan ve 5 sorudan oluşan yarı yapılandırılmış görüşme formu ile toplanmıştır. Çalışmanın nicel ve nitel verileri araştırmacı tarafından toplanmıştır. Verilerin analizinde SPSS 26 paket programı kullanılmıştır. Ölçeğin toplam ve alt boyutlarının aritmetik ortalamaları ve standart sapmaları hesaplanmıştır. Araştırmada öğretmenlerin branş, mezun oldukları okul türü ve kıdem değişkenlerine göre program okuryazarlık düzeylerinin hesaplanması ANOVA ile yapılmıştır. Test sonuçları %95 güven aralığında, $p<0,05$ anlamlılık düzeyinde değerlendirilmiştir. Nitel verilerin analizinde içerik analizi ve betimsel analiz yöntemleri kullanılmıştır. İçerik analizi, metnin tekrar eden kelimeler veya temalar açısından taranmasıdır (Patton, 2001/2014, s. 453). Betimsel analizde elde edilen veriler, daha önceden belirlenen temalara göre özetlenir ve yorumlanır (Yıldırım & Şimşek, 2011, s. 224).

Katılımcıların gizliliğini sağlayabilmek için araştırmaya katılan her öğretmene Ö1, Ö2… şeklinde kodlar verilmiştir. İçerik analizi sırasında, araştırmacı ve alanında uzman başka bir araştırmacı birbirlerinden ayrı olarak analizleri ve kodlamaları yapmışlardır. Analizler bittikten sonra araştırmacıların yaptıkları kodlamalar arasındaki tutarlılık Miles ve Huberman'a (1994) göre hesaplanmış ve kodlayıcılar arasındaki tutarlılığın %82 olduğu belirlenmiştir. Yıldırım ve Şimşek'e (2011) göre araştırmacıların görüşlerindeki tutarlılığın %70'in üzerinde olması güvenirlik için yeterlidir. Buna göre bu araştırmada nitel verilerin analizinde kodlayıcılar arasında güvenirliğin sağlandığı belirtilebilir.

Bulgular

Araştırmada "Ortaokul öğretmenlerinin program okuryazarlık düzeyleri nedir?" şeklinde belirtilen birinci alt problemine göre ortaokul öğretmenlerinin PO düzey algılarının ($\bar{x}$=4,1663, SS=,57258) yüksek olduğu görülmüştür. Katılımcıların okuma alt boyutunda "çok katılıyorum" düzeyinde, yazma boyutunda ise "katılıyorum" düzeyinde program okuryazarlığı algılarına sahip oldukları saptanmıştır. Araştırmanın ikinci alt problemi kapsamında ortaokul öğretmenlerinin eğitim programı okuryazarlık düzeylerinin meslekteki hizmet yılı, mezun olunan okul türü ve branş değişkenlerine göre farklılaşıp farklılaşmadığı incelenmiştir. Kıdem yılı fark etmeksizin tüm öğretmenlerin yüksek düzeyde program okuryazarı olduğu görülmüştür. Toplam ölçek puanlarına bakıldığında en yüksek ortalamaya 21-25 yıllık öğretmenlerin ($\bar{x}$= 4,2619), en düşük ortalamaya ise 15-20 yıllık öğretmenlerin ($\bar{x}$= 4,0947) sahip olduğu görülmüştür. Öğretmenlerin program okuryazarlık

düzeylerinin kıdem yılı değişkenine göre farklılaşmasına ilişkin varyans analizi sonucuna göre okuma alt boyutunda ortaokul öğretmenleri arasında kıdem değişkenine göre program okuryazarlık düzeylerinin anlamlı bir şekilde farklılık göstermediği görülmüştür ($F_{(5-498)}$= 1,546, p>.05). Yazma alt boyutu incelendiğinde de 6-10 yıllık ($\bar{x}$=3,9431) ve 16-20($\bar{x}$=3,9441) kıdeme sahip öğretmenlerin program okuryazarlık düzeyinin diğerlerine göre biraz daha düşük olmasına rağmen bu fark istatistiksel olarak anlamalı değildir ($F_{(5-498)}$= 1,498, p>.05). Bu veriler ışığında kıdem değişkeninin program okuryazarlık düzeyi üzerinde bir etkisinin olmadığı söylenebilir.

Ölçeğin tamamında, okuma ve yazma alt boyutlarında en yüksek ortalamaya fen edebiyat fakültesinden mezun olan öğretmenlerin sahip olduğu görülmüştür. En düşük ortalamalar ise diğer okul türlerinden mezun olan öğretmenlere aittir. Öğretmenlerin mezun oldukları okul türüne göre program okuryazarlık düzeylerinin farklılaşmasına ilişkin varyans analizi sonucuna göre okuma alt boyutunda ortaokul öğretmenleri arasında mezun oldukları okul türü değişkenine göre program okuryazarlık düzeylerinin anlamlı bir şekilde farklılık göstermediği görülmüştür ($F_{(5-498)}$= 1,546, p>.05). Yazma alt boyutu ise diğer okul türlerinden mezun olan öğretmenlerin program okuryazarlık düzeyi ($\bar{x}$=3,9969) eğitim fakültesi ($\bar{x}$=4,0159) ve fen edebiyat mezunlarına ($\bar{x}$=4,1127) göre biraz daha düşük olmasına rağmen bu fark istatistiksel olarak anlamalı değildir ($F_{(5-498)}$= ,802, p>.05). Bu sonuçlar okul türü değişkeninin program okuryazarlık üzerinde etkisinin olmadığı şeklinde yorumlanabilir.

Branş bazında ortalamalara bakıldığında okuma boyutunda Teknoloji tasarım öğretmenleri ($\bar{x}$=4,4436) en yüksek ortalamaya, Türkçe öğretmenleri ($\bar{x}$=4,1015) ise en düşük ortalamaya sahiptir. Yazma boyutunda da Teknoloji tasarım ($\bar{x}$=4,2189) en yüksek ortalamaya, Dün Kültürü ve Ahlak Bilgisi öğretmenleri ($\bar{x}$=3,8644) ise en düşük ortalamaya sahiptir. Ölçeğin toplam ortalamalarına bakıldığında Teknoloji tasarım öğretmenlerinin ($\bar{x}$=4,3393) en yüksek ortalamaya, Türkçe öğretmenlerinin ($\bar{x}$=4,0349) ise en düşük ortalamaya sahip olduğu görülmüştür. Öğretmenlerin program okuryazarlık düzeylerinin branş değişkenine göre farklılaşmasına ilişkin varyans analizi sonucuna göre ortaokul öğretmenlerinin branş değişkenine göre program okuryazarlık düzeyleri arasında anlamlı bir farklılık mevcut değildir ($F_{(6-508)}$= 1,383, p>.05). Okuma alt boyutunda ($F_{(6-508)}$= 1,023, p>.05) ve yazma alt boyutunda ($F_{(6-508)}$= 1,540, p>.05) da branşlar arasında anlamlı bir fark bulunamamıştır.

Araştırmanın üçüncü alt problemini "Öğretmenlerin program okuryazarlığı hakkındaki görüşleri nelerdir?" sorusu oluşturmaktadır. Öğretmenlere "Program okur yazarlığı denilince ne anlıyorsunuz?" diye sorulduğunda öğretmenler en çok (f=9) "Anlama, yorumlama ve uygulamayı bilme" şeklinde görüş bildirmişlerdir. "Öğretim programındaki hedef ögesi ile ilgili neler biliyorsunuz?" sorusu sorulduğunda 18 öğretmen hedeflerin "Öğrenciye kazandırılması gereken özellikler" olduğunu belirtmiştir. "Öğretim programındaki içerik ögesi ile ilgili neler biliyorsunuz?" sorusu sorulduğunda 7 öğretmen içeriğin "Ne öğretebilirim sorusunun cevabı" olduğunu belirtmiştir. "Öğretim programındaki eğitim durumları ögesi ile ilgili neler biliyorsunuz?" sorusu sorulduğunda 9 öğretmen eğitim durumlarının "Öğretim yöntem ve tekniklerinden yararlanılması" olduğunu belirtmiştir. "Öğretim programındaki değerlendirme ögesi ile ilgili neler biliyorsunuz?" sorusu sorulduğunda 14 öğretmen değerlendirmenin "Kazanım veya hedeflere ulaşılma düzeyini belirleme" olduğunu belirtmiştir.

Tartışma ve Sonuç

Araştırmanın ilk alt problemi doğrultusunda ortaokul öğretmenlerinin program okuryazarlık düzeyleri incelenmiş, ortaokul öğretmenlerinin program okuryazarlık düzey algılarının yüksek olduğu sonucuna ulaşılmıştır. Araştırmaya katılan ortaokul öğretmenlerinin kendilerini yüksek seviyede eğitim programı okuryazarı olarak gördükleri söylenebilir. Alanyazın incelendiğinde bu sonuca benzer olan çalışmalara rastlanmaktadır (Aslan, 2019; Aslan & Gürlen, 2019; Atlı, Kara & Mirzeoğlu, 2021; Aygün, 2019; Bayrı, 2022; Barut & Gündoğdu, 2023; Boncuk, 2021; Çetinkaya & Tabak, 2019; Dağ, 2021; Demir & Toraman, 2021; Erdem & Eğmir, 2018; Gömleksiz & Erdem, 2018; Güneş Şınego & Çakmak, 2021; Kale, 2022; Kana vd., 2018; Sarıca, 2021; Sural & Dedebali, 2018; Şahin & Aşkın Tekkol; 2023; Yılmaz & Kahramanoğlu, 2021). Ancak alanyazında bulunan bazı çalışmaların sonuçları bu araştırmanın sonuçları ile benzerlik göstermemektedir. Kahramanoğlu (2019) farklı kademede çalışan öğretmenlerle yapmış olduğu çalışmasında öğretmenlerin program okuryazarlığı algılarının orta düzeyde olduğu sonucuna varmıştır. Yıldız (2019) ve Kızılaslan Tunçer ve Şahin (2019) öğretmen adayları ile yaptıkları çalışmalarda katılımcıların orta düzeyde program okuryazarı ve bilgi düzeyinde oldukları sonucuna ulaşmışlardır.

Araştırma sonucuna göre, kıdem yılı fark etmeksizin tüm öğretmenlerin yüksek düzeyde program okuryazarı olduğu belirlenmiştir. Bu veriler ışığında kıdem değişkeninin program okuryazarlık düzeyi üzerinde bir etkisinin olmadığı söylenebilir. Alanyazında yapılan çalışmalar incelendiğinde benzer sonuçlara ulaşılmıştır (Aslan & Gürlen, 2019; Boncuk, 2021; Demir & Toraman, 2021; Güneş Şınego & Çakmak, 2021; Kahramanoğlu, 2019; Kale, 2022). Yapılan araştırmada toplam ölçek puanlarına bakıldığında en yüksek ortalamaya 21-25 yıllık öğretmenlerin, en düşük ortalamaya ise 15-20 yıllık öğretmenlerin sahip olduğu görülmüştür. Superfine (2008) deneyimli öğretmenlerin kendi deneyimlerine bağlı kaldıklarını ifade etmiştir. Kauffman, Johnson, Kardos, Liu ve Peske (2002) tecrübeli öğretmenlerin eğitim programına olan ihtiyaçlarının azaldığını ortaya koymuşlardır. Bayrı (2022) yaptığı çalışmada özel eğitim öğretmenlerinin mesleki kıdem yılı arttıkça program okuryazarlık durumlarının yükseldiği sonucuna ulaşmıştır.

Araştırmanın sonucuna göre okul türü değişkeninin program okuryazarlık üzerinde etkisinin olmadığı belirlenmiştir. Bu sonuca benzer şekilde Demir ve Toraman (2021) ve Aslan ve Gürlen (2019) yaptıkları çalışmada öğretmenlerin mezun oldukları fakülte ile program okuryazarlığı algıları arasında bir farklılık tespit etmemişlerdir. Aslan ve Gürlen'in (2019) araştırması farklı bir sonuç ortaya koymuştur. Araştırmacılar toplam PO düzeyinde eğitim fakültesi, fen edebiyat ve diğer okul türünden mezun olanlar arasında fark olmadığını ancak planlama boyutunda diğer fakültelerden mezun olan öğretmenler lehine manidar bir farkın olduğunu saptamışlardır. Gömleksiz ve Erdem (2018) öğretmen adayları ile yürüttüğü çalışmasında eğitim fakültesi öğrencilerin program okuryazarlık düzeyinin formasyon eğitimi programına kayıtlı öğrencilerden anlamlı bir şekilde eğitim fakültesi lehine farklı olduğu sonucuna ulaşmıştır.

Araştırmanın sonucuna göre ortaokul öğretmenlerinin branş değişkenine göre program okuryazarlık düzeyleri arasında anlamlı bir farklılık olmadığı belirlenmiştir. Ortaokul öğretmenlerinin branşlarının program okuryazarlıkları üzerinde bir etkisi yoktur. Alanyazın incelendiğinde bu sonuca benzer olan çalışmalara rastlanmaktadır (Aslan, 2019; Aslan & Gürlen, 2019; Boncuk, 2021; Demir & Toraman, 2021; Güneş Şınego & Çakmak, 2021; Kahramanoğlu, 2019; Kale 2022). Yapılan çalışmada, her ne kadar branş bazında öğretmenleri arasında anlamlı bir farklılık olmasa da elde edilen sonuca

göre ölçeğin toplam ortalamalarına bakıldığında Teknoloji tasarım öğretmenlerinin en yüksek ortalamaya, Türkçe öğretmenlerin ise en düşük ortalamaya sahip olduğu görülmüştür. Güneş Şınego ve Çakmak (2021) çalışmalarında branşlar arasında yaptığı sıralamada en yüksek ortalamaya Bilişim Teknolojileri ve Yazılım branşının sahip olduğu sonucuna ulaşmıştır. Kırmızı ve Akkaya (2009) Türkçe öğretmenleri ile yaptıkları çalışmada uygulama boyutu açısından öğretmenlerin kendilerini yeterli görmediklerini belirlemiştir. Kana, Aşçı, Zorlu Kana ve Elkıran (2018) tarafından yürütülen çalışmada, Türkçe öğretmeni adaylarının eğitim programı ögeleri hakkında yeterli bilgiye sahip oldukları sonucuna ulaşmıştır. Benzer şekilde Gömleksiz ve Erdem (2018) yaptıkları çalışmada Türkçe öğretmeni adaylarının program okuryazarlık düzeylerini yüksek olduğu sonucuna ulaşmışlardır.

Araştırmada "Öğretmenlerin program okuryazarlığı hakkındaki görüşleri nelerdir?" şeklinde ifade edilen üçüncü alt problemle ilgili nitel verilerden elde edilen sonuçlar incelenmştir. Öğretmenlere ilk olarak program okuryazarlığı denildiğinde ne anladıkları sorulmuştur. Öğretmenler genel olarak anlama, yorumlama ve uygulamayı bilme ve program bilgisine sahip olma şeklinde cevap vermişlerdir. Öğretmenlerin program okuryazarlığı kavramına yönelik bilgilerinin yeterli olduğu söylenebilir. Bayrı (2022) yaptığı çalışmada öğretmenlerin eğitim programı kavramına ilişkin bilgilerinin yeterli olduğu sonucuna ulaşmıştır. Aygün (2022) özel eğitim öğretmenlerinin program okuryazarlık kavramı hakkında bilgi düzeylerinin düşük ve orta düzeyde olduğu sonucuna ulaşmıştır. Araştırmada öğretmenlerin eğitim programının ögeleri olan hedef, içerik, eğitim durumları ve değerlendirme kavramları ile ilgili bilgi düzeylerinin genel olarak yeterli olduğu sonucuna ulaşılmıştır.

Yapılan araştırmanın nicel ve nitel verileri incelendiğinde ortaokul öğretmenlerinin ifadelerinde paralellik görülmekte, öğretmenler program okuryazarlığı konusunda kendilerini yeterli olarak ifade etmişlerdir. Bu açıdan bakıldığında araştırmanın nitel sonuçlarının, nicel sonuçları desteklediği görülmektedir.

Öneriler

Bu çalışmada Kayseri ilindeki ortaokul öğretmenlerinin program okuryazarlık düzeyleri incelenmiştir. Benzer çalışmalar farklı okul kademelerinde ve Türkiye'nin farklı bölgelerinde yapılabilir. Program okuryazarlığı, müfredatın uygulanmasının bir yönüdür. Program okuryazarı olan öğretmenler tarafından programın sınıflarda ne ölçüde uygulandığının belirlenmesi için ileri çalışmalar yapılabilir.