

# Investigation of the factors affecting the curriculum fidelity of teachers working at different types of schools<sup>1</sup>

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## Abstract

The purpose of this study is to examine the factors affecting the curriculum fidelity of teachers working in different types of school. In the study, case study design from qualitative research designs was used. The participants of the study were teachers working in primary, secondary and high school types in public school affiliated to the Ministry of National Education in rural district in a province located in the Northern Anatolia region of Türkiye in the fall semester of the 2022-2023 academic year. The participants were determined by convenient sampling method. The data of the study were obtained through a semi-structured interview form. The research data were analyzed using the thematic analysis method in accordance with qualitative research and findings were determined. While determining the findings, themes and categories were obtained and direct quotations were included to reflect the teachers' opinions. As a result of the research; It was determined that they expressed the opinion that curriculum characteristics, institutional characteristics, student characteristics, geographical conditions, family structure, social development of students, centralized education system, high-stakes tests, and pre-service and in-service training that teachers receive affect teachers' curriculum fidelity.

## 1 Introduction

The curriculum plays a very important role in achieving the goals of education and training. Demirel (2008) defines the curriculum as “the learning experiences provided to the learner through planned activities at school and out of school”. According to Varış (1996), curricula are all in-school and out-of-school educational activities organized by the educational institution for learners to achieve the goals of national education and the school. Curricula play an important role in the curriculum. Curricula are official curricula implemented in schools. Bay et al. (2017) defined the curriculum as “a systematic and planned form of knowledge, skills, attitudes, and values aimed to be gained by students in a discipline”.

In Turkey, curricula sent to schools from a single center are expected to be implemented in a

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standardized manner by all teachers. For this reason, teachers play an important role in the implementation of the curriculum in accordance with its objectives based on the curriculum (Bütün & Gültepe, 2016). In the process of implementing the curriculum, teachers' attitudes towards the curriculum affect its implementation and the realization of curriculum objectives. Adhering to the curriculum during the implementation phase directly affects its success (Dane & Schneider, 1998). Simultaneously, teachers should be actively involved in the process of designing curricula, which is the official curriculum. In this context, in the process of curriculum implementation, the degree of curriculum fidelity of teachers, who are the implementers of the curriculum, to the curriculum becomes very important in terms of serving the purpose of the curriculum.

Bümen et al. (2014) defined curriculum fidelity as “the implementation of the designed curriculum by teachers in a faithful manner”. Dusenbury et al. (2003) define curriculum fidelity as the extent to which teachers faithfully implement the curriculum as planned by curriculum development experts. In the literature, other definitions of the concept of curriculum fidelity are expressed as follows: integrity and quality of implementation (Dane & Schneider, 1998), how close the curriculum is to its design, how well, and how faithfully it is implemented compared to the designed curriculum (Century et al., 2010; Furtak et al., 2008; Mihalic, 2002; Pence, et al., 2008; Ruiz-Primo, 2005), the compatibility between the designed curriculum and the implemented curriculum (Yaşaroğlu & Manav, 2015), the similarity between the targeted and implemented forms of the curriculum (Bay et al., 2017), and implementing official curricula written and adhering to the criteria determined during the implementation phase of the curriculum (Arslan-Çelik & Gelmez-Burakgazi, 2021). When the definitions are examined, it is important to determine the curriculum fidelity in terms of the extent to which a designed curriculum is implemented, especially by teachers, by adhering to the original, how much the targeted outputs of the curriculum are achieved, which problems are encountered during implementation, and thus to examine whether the curriculum is implemented effectively (Karakuyu and Oğuz, 2021). By examining the curriculum’s fidelity, it can be ensured that the results can be determined at what level the curriculum outcomes and expectations of the designed curriculum are met (Dhillon et al., 2015), and information can be provided on how successfully the possible reasons for this situation can be explained at the point of failure (Bümen et al., 2014). Therefore, determining curriculum fidelity is important in determining whether the curriculum has achieved its purpose and receives feedback about the curriculum.

Many factors affect curriculum implementation. Fullan (2007) categorized the factors affecting the operation of the curriculum in the field as characteristics of change, regional/institutional factors, and external factors. Dusenbury et al. (2003) categorized the factors affecting curriculum fidelity as teacher characteristics, curriculum characteristics, institutional characteristics and teacher education. Bümen, et al. (2014) in their study titled “Factors Affecting Curriculum Fidelity in Turkey”, it is seen that *teacher education, teacher characteristics, curriculum characteristics, institutional characteristics, regional-social-economic-cultural characteristics, student characteristics, centralized education system, high-stakes tests and teacher training* are the factors affecting curriculum fidelity. One of the most important factors affecting curriculum fidelity is the regional and institutional characteristics (Bümen et al., 2003; Bümen et al., 2014). Conducting this study with teachers working in different school types (primary, secondary, and high schools) in a rural area is very important in terms of examining the effect of regional and institutional characteristics on curriculum fidelity. Accordingly, the main purpose of this study is to examine in depth the factors affecting the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement. In this study, the research questions were formulated in line with the factors put forward by Bümen et al. (2014) on the grounds that the factors affecting the curriculum in Turkey were defined by examining the studies conducted in the national literature:

- How do curriculum characteristics affect the fidelity of teachers working in different types of schools in rural settlements to the curriculum they implement?
- How do institutional characteristics affect the fidelity of teachers working in different types of schools in rural settlements to the curriculum they implement?

- How do student characteristics affect the fidelity of teachers working in different types of schools in rural settlements to the curriculum they implement?
- How do regional, social, economic, and cultural characteristics affect the fidelity of teachers working in different types of schools in rural settlements to the curriculum they implement?
- How does a centralized education system affect the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement?
- How do high-stakes tests affect the fidelity of teachers working in different types of schools in rural settlements to the curriculum they implement?
- How does the pre-service and in-service training they receive affect the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement?

## 2 Method

### 2.1 Research Design

The aim of this study is to examine the factors affecting the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement. Accordingly, a case study design and qualitative research method were used in this study. Case studies are a type of study in which one or more events, situations, individuals, social groups, systems, or interconnected systems are examined in depth (Ocak, 2019). Case studies are conducted to examine and understand the event or phenomenon in depth in its own field, and to describe and evaluate the research questions addressed within the scope of the research (Yin, 2017). The unit of analysis in this research was the factors affecting teachers' fidelity to the curriculum. Since a single unit of analysis was considered in the study, a holistic single-case study was used.

### 2.2 Participants

The research was conducted in the fall semester of the 2022-2023 academic year, in a rural district in a province located in the Northern Anatolia region of Türkiye, with teachers working in primary, secondary, and high school types in public schools affiliated with the Ministry of National Education. Participants were selected using a convenient sampling method. According to Creswell (2013), in the convenience sampling method, the researcher selected participants because they were willing to participate and suitable for the study. According to Fraenkel and Wallen (1990), convenience sampling used in the qualitative research process includes groups of people who are suitable, accessible, and ready for the study. In line with these explanations, teachers in schools who were willing to work were identified using a convenient sampling method. These teachers were interviewed, and the problem situation was examined in depth. Personal information about the participants is presented in Table 1.

**Table 1** Demographic characteristics of the teachers

	T1	T2	T3	T4	T5
Gender	Male	Male	Female	Male	Male
Graduation	Faculty of sport sciences	Faculty of education	Faculty of education	Faculty of education	Faculty of sciences and literature
Age	32	29	29	26	32
Seniority year	3 years	7 years	6 years	3 years	9 years
Profession	Physical education and sports teacher	Turkish teacher	Primary teacher	Special education teacher	Geography teacher

## **2.3 Measures and procedure**

The data for the study were obtained using a semi-structured interview form prepared by the researchers. While preparing this interview form, a literature review was conducted regarding the factors affecting curriculum fidelity, in line with the main problem addressed in the research. Interview questions were created based on the sub-factors of curriculum characteristics, institutional characteristics, regional-social-economic-cultural characteristics, student characteristics, centralized education systems, and high-stakes tests from the framework created by Bümen et al. (2014) regarding the factors affecting curriculum fidelity in Turkey. The interview form was examined by two faculty members who were experts in the field of Curriculum and Instruction. The interview questions were finalized in line with expert opinions. The final version of the interview form was piloted by interviewing a teacher who was not among the study participants. After the interview, the interview form was finalized by editing the parts that were not understood. In the interview form, how teachers evaluated the implementation of the curriculum, how they evaluated the educational philosophy of the curriculum, its goals, the content, the learning-teaching process, the measurement and evaluation processes, how they evaluated the conditions of the school in which they worked, and so on.

The questions in the interview form, which were developed by the researchers and finalized after piloting, were asked to the teachers through face-to-face interviews with the teachers who were among the participants of the study. During the interviews, with the permission of all teachers, voice recordings were made, and data were collected in this way. The interviews lasted an average of 30 minutes and were held with the teachers at the time and place determined by the teachers in their free time.

## **2.4 Data analysis**

In the research process, the collected data were analyzed based on thematic analysis. First, the voice recordings received from the teachers by the researchers were transcribed in Microsoft Word. Each researcher then read the data separately several times, and themes were created. Subsequently, categories and codes were found based on the teachers' discourses. At the end of the coding process, which was carried out separately by both researchers, the researchers came together and compared themes, categories, and codes. At the end of the discussions, the themes, categories, and codes were combined, and the coding process was completed.

## **2.5 Validity, reliability, and ethical considerations**

In qualitative research, evaluations are made in terms of credibility, transferability, consistency, and confirmability methods to ensure validity and reliability (Yıldırım & Şimşek, 2021). In this context, long-term interactions with the research participants ensured credibility in the context of internal validity. In addition, including the purposive sampling method in the study and including teachers' discourses in detail in the findings of the study ensured the transferability of the study. The data collected in the study were coded separately by two researchers and then brought together through discussion to ensure the consistency and confirmability of the study.

# **3 Findings**

## **3.1 Curriculum characteristics**

In the research, in the context of “curriculum characteristics”, one of the factors affecting teachers'

fidelity to the curriculum, teachers were asked, “How do curriculum characteristics affect the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they apply?” Based on the research question, seven interview questions and ten sub-interview questions were asked. The answers were analyzed, and themes, categories, sub-categories, and codes were provided in detail. As a result of the analyzes made under the title of “ curriculum characteristics,” which is one of the factors affecting teachers' fidelity to the curriculum, the categories of “objectives” in Table 2, “content” in Table 3, “learning-teaching process” in Table 4 and “measurement and evaluation process” in Table 5 were reached.

**Table 2** Curriculum characteristics affecting curriculum fidelity: Objectives

Theme	Category	Subcategory	Codes
Curriculum characteristics	Objectives	Suitability to student characteristics	Student abilities are not taken into account in the curriculum – T1 Not taking into account the developmental characteristics of the student- T2/T3 Not taking into account the characteristics of the geographical region where student live- T2 Individual differences are not taken in to account- T4 Not taking into account the differences in students' intelligence level, interests, competencies, and readiness levels- T5
		Suitability to student learning level	Not taking into account the developmental levels of students- T1/T2 Obejctives are below or above students' grade level- T1/T2/T3 Individual differences are not taken into account- T4
		Applicability of objectives	Inadequacy of course hours-T1 The objectives are not appropriate fort he grade levels- T2 Regional conditions are not taken into account- T3/T5 The duration of the objectives is sufficient-T4
		Objective-content alignment	Objectives and content are compatible with each other- T1/T2/T3/T4 Inadequacy of environmental characreristics of regional conditions- T5
		Achievability of objectives	Inadequacy of course hours - T1 The effect of individual differences - T2/T4/T5 Regional conditions are not suitable - T3

In the context of the categories reached, subcategories of “appropriateness to student characteristics, suitability to student learning level, applicability of objectives, objectives-content compatibility and accessibility of objectives” were reached under the “objectives” category.

All the teachers expressed their opinions in the context of “appropriateness to student characteristics.” Under this subcategory, it has been concluded that teachers emphasize that student abilities are not taken into account in the curriculum; the developmental characteristics of the student are not taken into account; the characteristics of the geographical region where the students live are not taken into account; individual differences are not taken into account; and the differences in the students' intelligence level, interests, competencies, and readiness levels are not taken into account. In this context, the sample teacher discourses were as follows:

“...student abilities are also different, they do not overlap. “The objectives are very nice on paper, but unfortunately it is not possible to implement them.” T1

“To be honest, some things remain in the curriculum. The student is not satisfied with its applicability.” T3

“I cannot say that it meets the student characteristics to a great extent. The developmental characteristics of the students and the geography they live in are not very effective in helping us achieve these objectives. Of course, we, as teachers, try to give that objective according to the student's level.” T2

“...there are many individual differences. “Due to individual differences, it seems impossible to achieve an objective, for example, 100 percent of all students.” T4

“Of course, I cannot make a standard comment on this issue because each student's intelligence level, interests, competencies and readiness levels are very different.” T5

Four of the teachers (T1, T2, T3, and T4) expressed opinions in the context of “appropriateness to the student level’. Under this subcategory, it was concluded that teachers emphasized not taking students' development levels into consideration, objectives being below or above grade levels, and not considering individual differences. In this context, the sample teacher discourses were as follows:

“...the child comes for four years only by playing games in physical education class, and then when he gets to the physical education teachers in the secondary school, it is naturally not possible to bring him/her to a level where he/she can do any of these sports.” T1

Therefore, in this respect, some of the objectives are not those that the student can understand, but are at that age level. I think maybe after a year or two, that subject can be taught better, that subject can be taught better.” T2

“In special education, we take the part of the curriculum that is suitable for the student as a basis. For example, while in the normal general education class, the 4th grade is directly based on the 4th grade curriculum, in special education there are cases where we take a year below for a 4th grade or 3rd grade student, or a year above if the student is in a better situation.” T4

All of the teachers expressed their opinions in the context of “applicability of the objectives.” Under this subcategory, while it was concluded that four teachers (T1, T2, T3, and T5) negatively emphasized the inadequacy of lesson hours, the objectives were not appropriate to the grade levels, and there was a lack of consideration of regional conditions, it was concluded that one teacher (T4) emphasized that the objectives should be sufficient in terms of time. In this context, the sample teacher discourses were as follows:

“It is never possible to complete these objectives properly in one academic year.” T1

“...objectives need to be evaluated. “I think it should be distributed in accordance with the next grade level and the previous grade level, that is, one semester should not be too dense and the other one should not be less dense.” T2

“It is not possible to accumulate the objectives over a full year in the region where I work. If you ask why, the winter conditions are harsh. There are very heavy snow holidays. In summer due to the hazelnut season and the interruption of the summer vacation, we have difficulty in completing the curriculum on the desired date at the desired time.” T5

“The objectives in the curriculum are at a level that can be easily implemented within a year. It is sufficient in terms of duration.” T4

All teachers expressed their opinions in the context of “objective-content harmony.” Under this subcategory, it was concluded that while four of the teachers (T1, T2, T3, and T4) emphasized the compatibility of the objective and content, the other teacher (T5) emphasized the inadequacy of the environmental characteristics of the regional conditions. In this context, the sample teacher discourses were as follows:

“The objectives are compatible with the content. I don’t think there is a problem in this, we already realize this while we are teaching the lesson, while we are teaching that objective.” T3

“...conditions are not always very suitable for this. Unfortunately, especially the dominant value judgments of the rural areas where I work, the academic competence of the children and the inadequacy of their personal beliefs create an obstacle in achieving our objectives.” T5

All of the teachers expressed their opinions in the context of “accessibility of objectives”. Under this subcategory, it was concluded that three of the teachers (T2, T4, and T5) emphasized the effect of individual differences, while the other teachers (T1 and T3) emphasized the inadequacy of lesson hours and the unsuitability of regional conditions. In this context, the sample teacher discourses were as follows:

“...the student group is also very important. However, this may vary depending on the student group. If we make an evaluation based on the middle class every year, if I say something average, I think I can reach around seventy percent for my own class.” T2

“So, it is quite possible to pass on an objective to the student, but it is not possible to do this in the foreseen forty or eighty hours.” T1

**Table 3** Curriculum characteristics affecting curriculum fidelity: Content

Theme	Category	Subcategory	Codes
Curriculum characteristics	Content	Distribution of Subjects	Insufficiency of course hours- T1/T4 The subjects are not suitable for the grade level- T2/T5 Equal distribution of subjects- T3
		Textbooks	Using study aid resources instead of textbooks-T1 Textbooks are not suitable for objectives-T2 Not suitable for student level- T3 Insufficient in terms of visual and real life examples-T4/T5 Texts are not comprehensible- T5

In the context of the categories reached, subcategories of “distribution of subjects” and “textbooks” were reached under the “content” category.

All the teachers expressed their opinions in the context of “distribution of subjects.” Under this subcategory, it was concluded that four of the teachers (T1, T2, T4, and T5) negatively emphasized the inadequacy of lesson hours and the subjects were not suitable for the grade level, while the other teacher (T3) positively emphasized the equal distribution of subjects. In this context, the sample teacher discourses were as follows:

“I saw that due to the subject distribution, more course hours were given to simple objectives. I saw that some of the objectives should have been processed more and given less lesson time than they should have.” T4

“I think some grade level subject distributions are appropriate, while others have inappropriate objectives.” T2

“So the subjects are actually evenly distributed. I don't think there is a problem with the distribution of topics.” T3

All of the teachers expressed their opinions in the context of “textbooks.” Under this subcategory, it was concluded that teachers emphasized the use of study aid resources instead of textbooks, the textbooks not being suitable for the objectives, not being suitable for the student grade level, being insufficient in terms of visual and real-life examples, and the texts not being comprehensible. In this context, the sample teacher discourses were as follows:

“I don’t have a textbook specifically for physical education class, but although it is not a textbook published by the national education system, there are physical activity cards in the form of a booklet that we use.” T1

“I have never come across anything very good, to be honest, in the textbooks. When they are good, mediocre books may appear the next year. But I definitely don't think that they are sufficient in terms of achieving the objectives.” T2

“I don't think textbooks are enough. I think there should be more content, more understandable content, appropriate to the level.” T3

“...I think the visual parts should be increased a little more. I think it would be better if there was a form of reflection in which the student sees examples from daily life rather than based on memorization.” T4

“I see a lot of inappropriate and unnecessary applications in textbooks. Therefore, I usually see text with very low perceptual distinguishability. In other words, I describe it as non-visual, with no emphasis on important places.” T5

**Table 4** Curriculum characteristics affecting curriculum fidelity: Learning-teaching process

Theme	Category	Subcategory	Codes
Curriculum characteristics	Learning-teaching process	Selection of teaching methods and techniques	Demonstration - T1/T5
			Paired work - T1
			Student-centered teaching methods and techniques- T2
		Use of instructional technologies	Drama - T3
			Individual education - T4
			Expository teaching- T5
Use of teaching materials	Discovery learning - T5		
	Not including instructional technologies-T1		
	Interactive board- T2/T3/T4/T5		
			Multimedia materials- T3/T4
			Computer- T4
			Tablet- T4
			Educational games- T4
			Virtual experiment applications-T4
			Training equipment-T1
			Not including teaching materials- T2
			Presentations- T3
			Concrete educational materials-T4
			Models and samples-T5
			Atlases- T5

In the context of the categories reached, the subcategories of “selection of teaching methods and techniques, use of teaching technologies and use of teaching materials” were reached under the “learning-teaching process” category.

All of the teachers expressed their opinions in the context of “selection of teaching methods and techniques.” Under this subcategory, it was concluded that teachers used demonstrations, partner work, drama, individual education, demonstrations, teaching through discovery, and student-centered teaching strategies, methods, and techniques. In this context, the sample teacher discourses were as follows:

“The teaching method and technique we use most frequently for physical education class is the demonstration technique. Because since the student is going to exhibit a physical skill, he/she needs to learn it perfectly by seeing the correct way.” T1

“As I said, we are trying to implement a student-centered constructivist education model here.” T2



“I try to do different activities such as how to make the letter feel, how the student can pronounce the letter better, presentations from different materials, as I said the drama method.” T3

“...when I think that, for example, two of the students will learn and one of them will fall behind in that teaching method or does not appeal to him, I teach with individual education, not with a group.” T4

“Since I am a geography teacher, I use the demonstration method because it is a field that appeals to the eye visually and there are many visual stimuli. I also used the teaching method through a presentation to convey general information. I also use the discovery teaching method, depending on the students' capacity and interests, if the conditions allow.” T5

All the teachers expressed their opinions in the context of “use of instructional technologies.” Under this subcategory, it was concluded that one of the teachers (T1) did not include teaching technologies, whereas the other teachers (T2, T3, T4, and T5) used interactive boards, multimedia materials, computers, tablets, educational games, and virtual experiment applications in the learning-teaching process. In this context, the sample teacher discourses were as follows:

“We use more concrete sports equipment in physical education classes than instructional technologies.” T1

“Technology simply our interactive whiteboards. I think that these are effective in the lesson process. Now, many of our teacher friends and I try to use the blackboard effectively during the lesson. Interactive events occur in particular. The student likes this very much. Children like to go up the board, touch the board, and perform an activity. I also try to use it frequently in classes, activity-centered.” T2

“We use visual and audio technology tools. I generally use audio and visual resources.” T3

“Smart boards, computers, tablets or experimental instruments attract the student's attention more, thus creating a more permanent learning environment in the course. We definitely try to include these in every achievement.” T4

All the teachers expressed their opinions in the context of “use of teaching materials.” Under this subcategory, it was concluded that one of the teachers (T2) did not include teaching materials, whereas the other teachers (T1, T3, T4, and T5) used training materials, presentations, concrete educational materials, models and samples, and atlases in the learning-teaching process. In this context, the sample teacher discourses were as follows:

“...since our lessons are often a training session, we use various training materials. In other words, our materials are the classic training materials that most of us know: balls, caps, funnels, bowls, slalom sets, coordination sticks, etc.” T1

“...an educational material that we can give concretely to the student, other than writing, that is, letters, also provides very important and permanent learning.” T4

“The shape of the world, the daily movement of the earth, the results of the world... In this, we use models and samples, we benefit from the interactive board, we benefit from our students' atlases, for example.” T5

**Table 5** Curriculum characteristics affecting curriculum fidelity: Measurement and evaluation process

Theme	Category	Subcategory	Codes
Curriculum characteristics	Measurement and evaluation process	Use of measurement and evaluation tools	Rubrics - T1 Written exam-T2/T3/T4/T5 Multiple choice tests- T2/T5 True and false-T2/T3/T5 Matching tests- T2/T5 Structured grid- T2 Question and answer method- T3 Evaluation the learning process- T4

In the context of the categories reached, the “use of measurement and evaluation tools” subcategory was reached under the “measurement and evaluation process” category.

All the teachers expressed their opinions in the context of “use of measurement and evaluation tools.” Under this subcategory, it was concluded that teachers made evaluations in the form of rubrics, written examinations, multiple-choice tests, true-false, matching, structured grids, dictation studies, questions and answers, and evaluations of the learning process. In this context, the sample teacher discourses were as follows:

“...we prefer the rubric in our measurement and evaluation, in line with the spirit of measurement and evaluation of the physical education course that we use all the time.” T1

“Of course, we use different measurement tools such as multiple choice, open-ended questions, true-wrong, matching, and structured grid, not just in one direction.” T2

“I finished the letter and I am practicing dictation. Since we switched to a written exam mentality in the 4th year, which I do not think they measure very much, we have a document in our hands. “We measure how much we have learned, questions and answers, right and wrong answers, again with written sources.” S3

“For this reason, we evaluate the general process and take into account the student's situation by evaluating the whole process rather than the product.” S4

“...I pay attention to this in order to eliminate the chance factor and increase content validity by using different methods such as written examination, multiple choice, true-false, matching in my 9-10-11-12 exam, regardless of the grade level in my exam.” S5

### 3.2 Institutional characteristics

In the research, “institutional characteristics,” one of the factors affecting teachers' fidelity to the curriculum, were examined. In this context, two interview questions were asked of the teachers based on the research question, “How do institutional characteristics affect the fidelity of teachers working in different types of schools in rural settlements to th, ‘curriculum they implement?’”. The answers were analyzed, and the themes, categories, and codes are given in detail in Table 6.

**Table 6** Institutional charact’ristics affecting curriculum fidelity

Theme	Category	Codes
Institutional characteristics	School conditions	Environmental conditions-T1/T4 Lack of physical conditions- T1/T2/T5 Transportation- T3
	The role of teachers and school administrators	Demoncratic school environment- T1/T2/T4/T5 Collaboration with colleagues- T2/T3/T5

The analysis conducted under the title of “institutional characteristics, which is one of the factors affecting teachers’ fidelity to the curriculum, the categories of school conditions, and the role of teachers and school administrators.

All teachers expressed their opinions in the context of “school conditions.” In this category, it was concluded that teachers emphasized environmental conditions, a lack of physical conditions, and transportation. In this context, the sample teacher discourses were as follows:

“...environmental, seasonal factors and geographical conditions also disrupt our physical education lessons. Since I teach in a busy geography where winters are very intense and long, our school does not have a hall, so we have to teach our lessons in the classroom when the weather is bad.” T1

“...there are some deficiencies in the structure outside the school’s environment outside the school where the student can learn socially from the environment of travel and observation. There are points where it is difficult to teach the subjects we have learned outside of school

and the achievements that appeal to people outside of school because our school is a village school. This is because there are not many places to do social activities or take people around.” T4

“First of all, the physical structure of our school is such that it negatively affects the general state of arousal. In other words, the school’s lack of lightening in the classrooms, the fact that the classrooms are not clean enough, the lack of a gymnasium for children to discharge in their free time, and the lack of an area where children can spend their free time negatively affect both our general state of arousal and children’s belonging to the school. Therefore, this situation also negatively affects learning.” T5

All the teachers expressed their opinions in the context of “the role of teachers and school administrators.” Under this category, it was concluded that teachers emphasized a democratic school environment and collaboration with colleagues. In this context, the sample teacher discourses were as follows:

“In general, I am aware of the awareness of my teachers and school administrators both in the implementation of the curriculum and in my course, and I am happy about this.” T1

“We are in contact with our chemistry teacher when we come across a topic related to rocks, for example. For example, we are in communication with our biology teacher on 11th grade issues such as population, ecosystem and habitat, and we base an intercollegiate and interdisciplinary approach.” T5

“For example, if my group were in our school right now, I would have the opportunity to see something different. I already make an extra effort to see something different, I can talk as much as I can at home or with my friends in different cities...” T3

### 3.3 Student characteristics

In this part of the study, “student characteristics”, one of the factors affecting teachers’ fidelity to the curriculum, were examined. In this context, two interview questions were asked to the teachers based on the research question “How do student characteristics affect the fidelity of teachers ofrking in different types of schools in rural, settlements to the curriculum they implement?”. The answers were analyzed, and the themes, categories, and codes are provided in detail in Table 7.

**Table 7** Student characteristics affecting curriculum fidelity

Theme	Category	Codes
Student characteristics	Student characteristics	Student abilities- T1
		Individual differences-T1/T3
		Deficiency in the developmental characteristics of students living in rural areas-T2
		Students’ learning level- T2/T3/T4/T5
		Interest of students’ families-T3
		Focusing problem- T3/T5
		Students’ attitude towards the lesson-T4-T5
		Student interests-T4
		Problem behaviors that students have-T4
		Financial inadequacies arising from rural areas (starvation and lack of nutrition)- T5

All teachers expressed their opinions in the context of “student characteristics.” In this category, teachers emphasized student abilities, individual differences, deficiencies in the developmental characteristics of students living in rural areas, the student’s learning level, the interest of students’ families, the problem of focusing, the students’ attitudes towards the lesson, student interests, problem behaviors of students, the financial inadequacies arising from rural areas, and the

nutritional problems of students. It was concluded that they emphasized that it causes In this context, the sample teacher discourses were as follows:

“...in the end, talents come into play somewhere. In this regard, I cannot say that our students are very talented in our school, especially in group sports and ball sports.” T1

“...there are differences arising from individual student differences. How it affects this, for example, I have a student who goes very fast, and a student who goes very slow.” T3

“Since the environment we are in is a rural environment, there may be some developmental deficiencies in students. “This causes us to experience some problems in terms of achieving gains.” T2

“...for example, one of them likes math class very much. Academically, she/he is ahead of his peers in the mathematics course. Here, the curriculum in that mathematics appeals to the student, but when, for example, the student falls one step further behind in the Turkish lesson compared to her/his friends, we need to make changes in the curriculum and adjust the achievements.” T4

“Unfortunately, since it is generally a rural area, children generally suffer from financial inadequacy. If you ask, what is the connection between financial inadequacy and learning? There are many connections between them. For example, a child does not have her own room. The child could not obtain enough heat. The children did not have sufficient resources. The child comes to school hungry, that is, they are not fed enough. When you look at these on their own, you may see them as a very small element, but when they come together, they are a factor that affects learning very negatively.” T5

“When problem behaviors are seen in our students, we see that the efficiency in lessons decreases. We are trying to prepare content to correct the problem behavior. “It causes positive and negative effects on the student and therefore on the permanence of the curriculum.” T4

### 3.4 Regional, social, economic, and cultural characteristics

In this part of the study, “regional, social, economic, and cultural characteristics”, which are among the factors affecting teachers’ fidelity to the curriculum, were examined. In this context, an interview question was asked to the teachers based on the research question “How do regional, social, economic, and cultural characteristics affect the fidelity of teachers working in different types of schools in rural settlements to the curriculum they implement?”. The answers were analyzed, and the themes, categories, and codes are provided in detail in Table 8.

**Table 8** Regional, social, economic, and cultural characteristics affecting curriculum fidelity

Theme	Category	Codes	
Regional, social, economic and cultural characteristics	Regional	The effect of geographical conditions-T1/T3/T5	
	Social	Low social development of students - T2/T5	
	Family Structure		Lower socio-economic status of families-T1/T2/T4
			Cultural characteristics of families- T1/T2
			Low education level of families - T1
		Lack of familt interests - T1/T2/T3	
		Lack of communication within the family - T4	

As a result of the analyses made under the title of “regional, social, economic and cultural characteristics”, which is one of the factors affecting teachers’ fidelity to the curriculum, the categories “regional, social and family structure” were reached.

Three teachers (T1, T3, and T5) expressed opinions in the “regional” context. In this category, it was concluded that teachers emphasized the effects of geographical conditions. In this context, the sample teacher discourses were as follows:

“The school where I work has harsh winter conditions that make physical education lessons difficult.” T1

“Education is disrupted a lot due to snow vacations. Therefore, it is a big problem in terms of not being able to complete the subjects in the curriculum and children’s getting cold from school.” T5

Two of the teachers (T2 and T5) expressed their opinions in the “social” context. In this category, it was concluded that teachers emphasized the low social development of students. In this context, the sample teacher discourse was as follows:

“As I said, we are in a rural area. We need to support students more. We need to support students more than students in the central location. Students had less experience than students at the center. Of course, we must organize the curriculum within this framework. We cannot provide the curriculum to the students in its current form. The region I live in has difficulties due to its cultural characteristics and economic structure.” T2

Four teachers (T1, T2, T3, and T4) expressed opinions in the context of “family structure.” In this category, it was concluded that teachers emphasized the low socioeconomic level of the families, the cultural characteristics of the families, the low education level of the families, the lack of family interest, and the lack of communication within the family. In this context, the sample teacher discourses were as follows:

“ Since students are not sufficiently supported at home and are not prepared for education, it is as if our education restarts every morning. This situation places a lot of strain on both students and teachers. So, when we put all these together, these conditions in the region negatively affect the implementation of the curriculum.” T1

“When we collectively evaluate the situation of the student’s parents and the people in the family where the student first starts learning from many regional, economic, social and emotional aspects, if there are problems in the family, parents at home, the people to whom this will directly reflect are the children, our students.” T4

“...the time he/she devotes to his/her child decreases a lot, when the time he/she allocates to his/her child decreases, learning is delayed, and as learning is delayed, the curriculum is also postponed.” T3

“Families have difficulties in taking care of students. Fathers are usually outside of work. Students have these limitations. This was reflected in the curriculum. We need to shape the curriculum accordingly.” T2

### 3.5 Centralized education system

In this part of the research, the “centralized education system,” one of the factors affecting teachers’ fidelity to the curriculum, was examined. In this context, an interview question was asked of the teachers based on the research question, “How does a centralized education system affect the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement?”. The answers were analyzed, and the themes, categories, and codes are given in detail in Table 9.

**Table 9** Centralized education system affecting curriculum fidelity

Theme	Category	Codes
Centralized education system	Preparation of regional curriculum	Geographical conditions- T1/T2/T3/T5
		Student profile- T1
		Socio-economic status of the family- T1/T3
		The suitability of the physical characteristics of the school to the lessons and curricula- T1
		Preparation of regional curriculum- T2/T3/T4
		Communication within the family- T3

	The suitability of the environmental characteristics of the school to the lessons and curricula- T+ /T5
Being a centralized curriculum	Adhering to the framework curriculum- The prominence of the functional curriculum being implemented- T3

As a result of the analyses made under the title of “centralist education system,” which is one of the factors affecting teachers’ fidelity to the curriculum, the categories of “preparation of regional curriculum and being a centralized curriculum.

All of the teachers expressed their opinions in the context of “preparation of the regional curriculum”. Under this category, it was concluded that teachers emphasized geographical conditions, student profile, socioeconomic status of the family, suitability of the physical characteristics of the school to the lessons and curricula, preparation of regional curriculum, communication within the family, and suitability of the environmental characteristics of the school to the lessons and curricula. In this context, the sample teacher discourses were as follows:

“I think regional curriculum should be prepared rather than centralized curriculum. Okay, let us have a basic framework, but I think we need to expand it with subheadings. Regional differences are also very effective in central examinations. I think that students should be evaluated according to region, and curricula should be prepared according to region. I think it should be left to the provinces a little more. “There should be a central roof, but we need to diversify the subheadings.” T2

“Therefore, the curriculum can be completely adapted to the region and the student profile. This can be economical. geographical conditions can be taken into account, the socioeconomic status of the parents can be taken into account, and the suitability of the school for this course can be taken into account. In other words, the curriculum can be programmed in physical education classes based on many variables.” T1

“For example, the conditions in Ankara are different from those in Hakkari. The natural structures of Hakkari and Izmir are very different. The geographical, climatic, and cultural conditions in Hakkari are different from those in Izmir. The natural conditions and priorities are not the same. Therefore, because there are so many differences, this heterogeneous situation in education makes centralization very dysfunctional.” T5

One of the teachers (T3) expressed an opinion in the context of “being a centralized curriculum”. In this category, it was concluded that the teacher emphasized fidelity to the framework curriculum and highlighted the curriculum being implemented. In this context, the sample teacher discourse was as follows:

“...so I’m actually doing how I can apply this curriculum to this region. So, I am stretching, I have to stretch because the centralized curriculum does not work in your village. It does not work in the region in which you live Now, I do not have the chance to implement the curriculum at the same level as the teacher at the center. Family problems, family conditions, and the physical condition of the school all affect this. It affects negatively. This is what most teachers should do. Now, it is like this; we should not be standardized anyway. That’s why we exist. We must shape this according to our own. Of course, without going beyond this framework.” T3

### 3.6 High-stakes tests

In this part of the research, “high-stakes tests,” one of the factors affecting teachers’ fidelity to the curriculum, were examined. In this context, an interview question was asked of the teachers based on the research question, “How do high-stakes tests affect the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement?”. The answers were analyzed, and the themes, categories, and codes are given in detail in Table 10.

**Table 10** High-stakes tests affecting curriculum fidelity

Theme	Category	Codes
High-stakes tests	Preparation of exams	Incompatibility of objectives and lesson hours in the curriculum- T1
		Preparation of exams- T2/T3/T4
		Directing to objectives that will ensure success in exams- T2/T4/T5
		Not supporting students' social and emotional development- T4

As a result of the analyses made under the title of “high-stakes tests,” which is one of the factors affecting teachers’ fidelity to the curriculum, the “preparation of exams” category was reached.

All teachers expressed their opinions in the context of “preparation of exams.” Under this category, it was concluded that teachers emphasized the incompatibility of the objectives and lesson hours in the curriculum, preparation of exams, directing students to objectives that would ensure success in exams, and not supporting the social and emotional development of the student. In this context, the sample teacher discourses were as follows:

“...the curriculum is too much in terms of subject matter. It is almost a utopia to be able to complete all of these in one academic period, but they all offer space, so if we can complete this, the student will also be successful in these aptitude tests.” T1

“Unfortunately, the exam determines the fate of the student, and, unfortunately, we rush our students to train them for this. I mean, I have to teach why a first-grade student of mine is learning to fill in optics. If a second-year student is in, this child’s place is not in optical coding or he should not be doing optical coding.” T3

“... this logic can also occur in students. Are these topics included in the exams? Sometimes thoughts such as “If there is, let us work more on this subject, there is no need to work on a subject that does not exist. This makes the implementation of the curriculum difficult and causes some achievements to be missed in the curriculum. I think the reality of exams negatively affects the curricula in this respect. It is on the way to gaining all the objectives in the curriculum.” T2

### 3.7 Teacher Training

In this part of the study, “teacher training”, one of the factors affecting teachers’ fidelity to the curriculum, was examined. In this context, two interview questions were asked to the teachers based on the research question, “How do the pre-service and in-service trainings affect the fidelity of teachers working in different types of schools in a rural settlement to the curriculum they implement?”. The answers were analyzed, and the themes, categories, and codes are given in detail in Table 11.

**Table 11** Teacher training affecting curriculum fidelity

Theme	Category	Codes
Teacher Training	Training to the Implementation Curriculum	Courses taken in undergraduate education- T1/T2/T3/T4/T5
		Master’s degree education- T2
		In-service training- T3/T5
	Individual effort- T2/T5	
	Contribution of the Trainings to the Implementation Curriculum	Positive contribution to the teacher - T1/T2/T3/T4/T5 Positive contribution to the student- T3/T4/T5

As a result of the analyses made under the title of “teacher training,” which is one of the factors affecting teachers’ fidelity to the curriculum, the categories “training to the implementation

curriculum, and the contribution of the training to implementation of the curriculum.

All teachers expressed their opinions in the context of “” training in the implementation curriculum. “ In this category, it was concluded that teachers emphasized the courses taken in undergraduate education, master’s degree education, in-service training, and individual efforts. In this context, the sample teacher discourses were as follows:

“Activities related to teaching a lesson. I took it during the November seminar. Concepts and numbers remain abstract when it comes to teaching mathematics. This was the last training I received, such as how to explain things more effectively.” T3

“So, if you mean apart from the training at the university, of course, I am trying to improve myself and my equipment through the seminars given in the form of distance education at “Teacher IT Network, “if they are relevant to my field or course. Apart from that, as I said, I basically try not to lose my student status.” T5

“I also have a master’s degree. I have a master’s degree; let us not skip that. “We took a short break there, but we will continue where we left off.” T2

All teachers expressed their opinions in the context of “ training to implement the curriculum”. Under this category, it was concluded that teachers emphasized the positive contributions of the training received to teachers and students. In this context, the sample teacher discourses were as follows:

“I follow the curricula regularly and follow the developments regularly. We keep track of what has been added or removed from the objectives and, of course, we should. Of course, there are no courses directly related to the curriculum, but there are courses that require us to follow the curriculum indirectly. I think it is useful in this respect.” T2

“Since the training we receive is multifaceted, it shows us what path we can follow when we encounter students in these fields, how we can adapt the training we receive to the student in a mixed way, and how we can create an original method and technique ourselves, depending on the student’s situation, if necessary. It is useful in this respect.” T4

#### 4 Conclusion and discussion

In this study, the factors affecting the fidelity of teachers working in different types of schools in a rural settlement in a province in the Northern Anatolia region of Turkey in the fall semester of the 2022-2023 academic year were examined in depth. Accordingly, as a result of the research, teachers expressed opinions about how curriculum characteristics, institutional characteristics, student characteristics, regional, social, economic, and cultural characteristics, centralized education systems, high-stakes tests, and teacher training affect their fidelity to the curriculum they implement in their lessons.

In the theme of “Curriculum Characteristics,” which is one of the factors affecting teachers’ fidelity to the curriculum, teachers were asked to question how the objectives, content, learning-teaching process, and measurement and evaluation process affect the fidelity of the curriculum. When teachers’ opinions about how the objectives in the curriculum affect its applicability were examined, they stated that the objectives were not appropriate for the student characteristics and student learning level. At this point, teachers stated that students’ individual differences and developmental characteristics were not considered in the objectives. In addition, teachers stated that not considering regional and environmental conditions, along with other features mentioned in terms of accessibility and applicability of the objectives, affected their fidelity to the curriculum.

Teachers evaluated the distribution of subjects and textbooks in the content category, which is another category within the curriculum characteristic theme. In the context of the distribution of



subjects, they stated that the inadequacy of course hours, the subjects not being suitable for the grade levels, and the unequal distribution of subjects negatively affected fidelity to the curriculum. In addition, in the context of textbooks, they stated that the textbooks are not suitable for the objectives and student grade level, the books are not sufficiently supported with visual and real-life examples, and the texts in the books are not understandable, negatively affecting fidelity to the curriculum.

Opinions of teachers in the “learning-teaching process” category, another category within the theme of curriculum characteristics, were taken regarding the teaching methods and techniques they chose in their courses, as well as the teaching technologies and teaching materials. In the context of the learning-teaching process, the selection of teaching methods and techniques from the sub-categories directly affects the fidelity of the curriculum. Dane and Schneider (1998), Dusenbury et al. (2003), and O’Donnell (2008), in the context of the quality of implementation, one of the dimensions for measuring fidelity to the curriculum, the choice of methods and techniques used by practitioners, and the way they are implemented affect curriculum fidelity. Teachers include demonstration, pair work, drama, individual education, teaching through presentation and discovery teaching, and student-centered teaching strategies, methods, and techniques in their lessons while implementing the curriculum. Teachers benefit from instructional technologies and materials while implementing the curriculum. It was concluded that the instructional technology most frequently used by teachers is the interactive board. In addition, teachers rarely use computers, tablets, educational games, or visual and audio multimedia materials in their lessons. One of the most important factors affecting the fidelity of a curriculum is the use of materials. According to Gresham et al. (2000), if new or important resource/material is required during the implementation of the curriculum, it can increase the fidelity of the curriculum. The results showed that teachers benefit from teaching materials that are suitable for their objectives in the curriculum they implement. When the relevant curriculum is examined on the basis of teachers’ branches (MoNE, 2018), it is seen that they express their opinions that they use the teaching materials prescribed in these curricula in relevant lessons.

The last category discussed in the theme of curriculum characteristics was the measurement and evaluation process. In this regard, the measurement and evaluation tools teachers used were in the sub-category of the use of measurement and evaluation tools. Some teachers frequently use written examinations, true-false, matching, and multiple-choice tests in their lessons. Therefore, the teachers who were the participants of this study mostly used traditional measurement tools, and only one teacher stated that he used the structured grid technique, one of the complementary measurement tools provided by the current curriculum. When the explanations of MoNE (2018) regarding the understanding of measurement and evaluation in the curriculum are examined, it is stated that a measurement and evaluation structure should be created in which teachers’ development of students in the learning-teaching process is monitored during the implementation of the curriculum, and the active participation of teachers and students is ensured. From this point of view, it can be seen that research participants mostly benefit from traditional measurement tools instead of complementary measurement tools. A similar result was obtained in the research conducted by Dikbayır and Bümen (2016). The results of the relevant research have concluded that teachers almost never make use of measurement tools such as performance, project assignments, peer, and self-assessment, and that they think of the nature and application processes of these measurement tools as if they were some other traditional measurement tools.

The other theme discussed in the research is “institutional characteristics”. In this context, it is

seen that teachers state that the conditions of the school and the roles of teachers and administrators affect fidelity to the curriculum. Dusenbury et al. (2003) state that the importance of school culture, the effective leadership of administrators, the opportunities and support provided to school staff by administrators, and the importance of the morale level of the staff affect fidelity to the curriculum. When examined in the context of school conditions, it was observed that teachers stated that environmental conditions (weather conditions and social activities), lack of physical conditions in the school, and transportation problems have a negative impact on fidelity to the curriculum. In the context of the roles of teachers and administrators, it has been concluded that a democratic environment in schools and teachers working in cooperation with other colleagues positively affects curriculum fidelity. However, it is also the result that teachers experience deficiencies in cooperation with their colleagues. At this point, it is important for teachers to communicate effectively with each other, school administration and school staff within the school, in accordance with the school culture (Dusenbury et al., 2003). When the study is examined in this context, it is concluded that one of the important factors affecting fidelity in the curriculum is communication between administrators and teachers in the context of institutional characteristics. In addition, in the study conducted by Bay et al. (2017), in line with the opinions of the teachers, it was concluded that the school-environment factor was emphasized and management implementation factors affected curriculum fidelity.

In Bümen et al.'s (2014) study, it was stated that student characteristics affect curriculum fidelity. When teachers' opinions about fidelity to the curriculum are examined in the "Student characteristics" theme of the research, teachers stated that student abilities, individual differences, deficiencies in the developmental characteristics of students living in rural areas, students' learning level, parents' indifference, students' concentration problems, their attitudes towards the lesson, their interests and problematic behaviors, and financial inadequacies arising from rural areas have a negative impact on fidelity to the curriculum. Similar research findings were reported by Bay, et al. (2017) and Gürbüz (2020) were also obtained in the research results. In Gürbüz's (2020) study, which examined music teachers' fidelity to the curriculum, it was concluded that students' interest levels were quite effective in the implementation phase of the curriculum. Similarly, Bay et al. (2017) found that factors such as inadequacies in students' level of readiness, their lack of interest in the lesson and school, individual differences, and students' lack of studying outside of school affected teachers' fidelity to the curriculum.

Teachers stated that geographical conditions, family structure, and students' poor social development affected their fidelity to the curriculum. In particular, it was observed that teachers expressed more opinions about the fact that low socioeconomic level families, cultural characteristics of families, low education level of families, lack of communication within the family, and lack of interest in families negatively affect fidelity to the curriculum. Bümen et al. (2014) stated that the differentiation of socio-economic and cultural characteristics according to geographical regions in Turkey will affect teachers' fidelity to the curriculum. From this point of view, the socioeconomic and sociocultural characteristics of students and families in rural areas explain the reason for the negative effect on curriculum fidelity.

Teachers expressed their opinions in favor of preparing regional curriculum under the theme of "centralized education system" and adhering to the centralized curriculum. Teachers emphasized that geographical conditions, student profile, socioeconomic level of the family, suitability of the school's physical characteristics to the lesson and curriculum, communication within the family, and suitability of the school's environmental characteristics to the lesson and curriculum cause

problems in adhering to the centralized curriculum and the necessity of preparing a regional curriculum. Yüksel (1998) described it as a fundamental problem in countries with a centralized education system in which the curriculum fails to meet the needs and expectations of geographical regions, students, and parents, and that the curriculum does not comply with the conditions of the region. This situation causes the expected results of the curriculum designed according to Bümen et al. (2014) to not be achieved. Therefore, it can be said that the available research results support these statements.

When teachers' opinions about "high-stakes tests," one of the factors affecting fidelity to the curriculum, are examined, the process of preparing students for the exam directly and negatively affects fidelity to the curriculum. In this regard, when fidelity to the curriculum was examined, it was concluded that exam preparation activities led to the neglect of most of the curriculum objectives. Teachers direct students towards objectives that will ensure success in exams. This result obtained from the research was reported by Yaşar (2012) and Bümen et al. (2014), who explained that the expectations and demands of parents and students cause teachers to focus on exam-oriented objectives. This situation, which arises especially in line with the expectations of the students, causes teachers to focus on exam-oriented subjects in the curriculum and therefore reveals that they neglect some subjects in the curriculum. Therefore, this may indicate that the desired results were not achieved in the outputs of the designed curriculum.

One of the important factors affecting fidelity to the curriculum and the last factor discussed in the research is "teacher training." According to Fullan (2007), the training that teachers receive regarding the implementation processes of the curriculum is an important part of the successful implementation of the curriculum, and therefore, for the curriculum to achieve the expected results. Teachers state that what they learned in undergraduate education, graduate education, in-service training, and through their individual efforts, positively affects their fidelity to the curriculum. In this direction, it was concluded that the teachers also stated that these trainings contributed positively to both students and teachers. Therefore, training that teachers receive both before and during the service in the process of implementing the curriculum and supporting their professional development processes can ensure that the expected results of the designed curriculum outputs are more successful.

#### **4.1 Limitations and future directions**

In line with the results of this research, the limitations of the research and suggestions for future studies are as follows:

- In this study, the factors affecting teachers' fidelity to the curriculum identified by Bümen et al. (2014), specifically for Turkey, were discussed, and teachers' opinions on how these factors affected the implementation process of the curriculum were examined in depth. In this context, it was determined that these factors, determined specifically for Turkey, affect fidelity to the curriculum, and that many social, cultural, and economic factors negatively affect the implementation processes of the curriculum, especially in rural areas. At this point, it is important to consider curriculum fidelity and the factors affecting this situation when organizing educational policies.
- The participants expressed negative opinions on the characteristics of the curriculum in terms of its objectives and textbooks. Therefore, it is important to consider this situation in the updates made by the MoNE in the curriculum.
- Apart from these suggestions, it is thought that school administrators establishing effective communication with teachers to create an effective school culture and provide a democratic

environment by giving teachers the right to have a say in school management will also increase the fidelity of the curriculum.

- In this study, the factors affecting fidelity to the curriculum stated by Bümen et al. (2014) were considered. Accordingly, the results of this study showed that teachers explained their fidelity to the curriculum based on these factors. To reveal the factors affecting teachers' fidelity to the curriculum, this situation can be examined comprehensively by conducting phenomenological studies.
- In this study, teachers working in different professions and grades took part as participated. In future, similar studies can be conducted with teachers working at the same grade level and professions.
- In this study, which was conducted with teachers working in rural areas, teachers mentioned difficulties in implementing the curriculum, especially in the context of regional, environmental, and socioeconomic levels. Teachers working in urban centers were not included in this study. Therefore, in future research, studies should be conducted to determine the factors affecting the fidelity of teachers working in urban/provincial centers in the curriculum. In fact, the factors affecting teachers' fidelity to the curriculum can be compared using a holistic multiple-case study.
- The data for this study were collected using a structured interview form. Teachers' fidelity to the curriculum should be supported by the observation of their curriculum practices following the interviews.

## 5 Statement of researchers

### 5.1 Researcher contribution rate statement

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

### 5.2 Conflict statement

The authors declare that they have no conflicts of interest. The publication rights of this article have been transferred to the Pedagogical Perspective Journal.

### 5.3 Support and thanks

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