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AN EXAMINATION OF THE 7TH GRADE MIDDLE SCHOOL MATHEMATICS CURRICULUM WITHIN THE SCOPE OF STAKE'S PROGRAM EVALUATION MODEL

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ABSTRACT

The aim of this study is to evaluate the 7th grade middle school mathematics curriculum, which has been implemented in the 2024–2025 academic year, in terms of input, process, and product within the framework of Stake's Congruence–Contingency Model. Based on teachers' opinions, the research seeks to reveal the applicability and effectiveness of the current 7th grade mathematics curriculum in practice, thereby contributing to the processes of revising or improving the curriculum. The study was conducted on a voluntary basis with a total of 15 mathematics teachers working in public schools in the province of Hatay. Ethical committee approval required for the study was obtained. To collect the data necessary for the findings, a semi-structured interview form developed by the researchers was used. During the development of the interview form, expert opinions were consulted, and a pilot application was carried out prior to the main study. The research data obtained through the case study design, one of the qualitative research methods, were analysed using the descriptive analysis method. The study concluded that the curriculum could not be implemented regularly by teachers due to factors such as the school's physical conditions, availability of materials, class size, problems arising from natural disasters, and the assessment system. These unfavourable conditions were also found to hinder the achievement of the intended learning outcomes and skills emphasized in the curriculum. Furthermore, it was determined that there was a lack of alignment between the curriculum content—specifically the topics—and the textbook used as the primary resource, which in turn resulted in the inadequacy of activities in terms of both quality and quantity. Regarding the curriculum, teachers suggested simplifying the content section, increasing available resources, and enhancing schools' physical and technological infrastructure.

Anahtar kelimeler: 7th grade mathematics curriculum, mathematics curriculum, program evaluation, Stake's Congruence–Contingency Model

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INTRODUCTION

The rapidly changing and transforming social and cultural structure of the 21st century necessitates the continuous renewal and improvement of education systems. In the transition to an information-based society, the attitudes, knowledge, and skills expected of individuals change in parallel with the evolving world; this change is directly reflected in schools and, consequently, in curricula (Glatthorn et al., 2018). Curricula are fundamental tools aimed at equipping individuals with the competencies required by the age. The fact that the curricula of subjects taught in schools are up-to-date, functional, and applicable emerges as a factor that directly affects the quality of education (Ornstein & Hunkins, 2018; Saban, 2020). The effective and efficient implementation of curricula, one of the key components of the education system, is not limited to content alone; rather, it requires the comprehensive evaluation of teachers, students, the teaching process, and assessment components from a holistic perspective (Demirel, 2017).

Mathematics plays a central role in developing students' higher-order thinking skills such as logical reasoning, problem-solving, analysis, and establishing connections between concepts (National Council of Teachers of Mathematics [NCTM], 2000). Particularly at the middle school level, mathematics instruction is fundamental in enabling students to acquire these skills (Altun, 2020). An examination of the 7th grade middle school mathematics curriculum reveals that it has been structured both to enhance academic achievement and to provide students with a perspective that enables them to generate solutions to problems encountered in daily life. However, factors such as the extent to which these objectives are reflected in instructional processes, the applicability of the curriculum, and teachers' views on the program offer important insights to curriculum developers and evaluators in terms of assessing program effectiveness (Akgün, 2021; Dönger et al., 2016; Yüksel, 2012).

In every country, the evaluation of curricula is often carried out systematically within the framework of specific models. Curriculum evaluation models not only determine the extent to which a program achieves its objectives, but also reveal its strengths and weaknesses encountered during implementation (Stake, 1973; Fitzpatrick et al., 2011). In this regard, Stake's Congruence–Contingency Model offers a comprehensive evaluation approach that considers not only the degree to which programs achieve their goals but also the conditions and outcomes encountered during implementation. The “congruence” dimension of the model examines the consistency between the planned curriculum and its actual implementation, while the “contingency” dimension considers variations and unexpected circumstances that may arise in practice (Stake, 1975; Aygören & Er, 2020).

Stake's Congruence–Contingency Model enables the development of an in-depth understanding of how programs function under real-life conditions. Particularly, teachers' perceptions regarding the applicability of the curriculum, along with their classroom experiences and observations, can yield highly meaningful data when integrated with the two-dimensional evaluation approach offered by the model (Özdemir, 2019). Therefore, evaluation studies based on teachers' perspectives provide significant input not only for assessing existing curricula but also for the development of new ones (Yüksel, 2012; Kaya & Yıldırım, 2023).

In program evaluation, the Congruence–Contingency Model is an evaluation model developed by Stake in 1967, based on description and judgment processes. According to this model, intuitive approaches and subjective norms should be excluded from the evaluation process; instead, a more objective and systematic method should be

adopted (Fitzpatrick et al., 2011; Aygören & Er, 2020: 45). Stake's model advocates that in curriculum evaluation, not only should the objectives be determined, but these objectives should also be examined from multiple perspectives by all stakeholders, including teachers, students, administrators, and parents.

The evaluation process in the model is structured under three main components: input, process, and product. At each stage of the model, intentions, observations, standards, and judgments are evaluated separately and documented systematically (Stake, 1975). Inputs include students' readiness levels, their existing knowledge and skills, previous experiences, and areas of interest. Inputs directly influence the products students will achieve. The process encompasses students' interactions with teachers, peers, and families, as well as dynamics such as the classroom environment, instructional materials, and teaching methods used. The product stage evaluates the attitudes, aspirations, academic achievements, and learning outcomes that students acquire from these interactions and experiences (Karaca & Şahin, 2024; Kutlu & Korkmaz, 2017; Sarıgöz, 2015-2016). In other words, products are outputs that reflect the effects of the program on its stakeholders and are significant.

Stake's Congruence–Contingency Model particularly focuses on the overlap between the intended outputs and the actual results, aiming to evaluate the success of implementation based on this alignment.

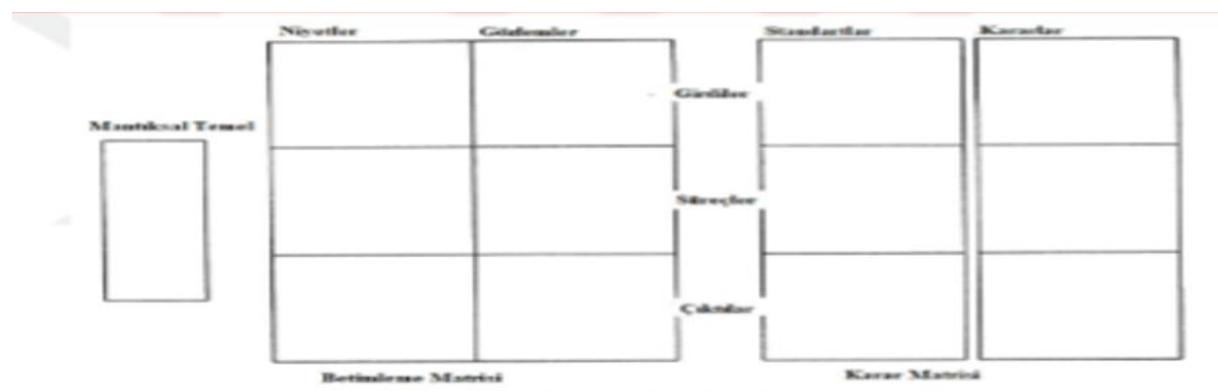


Figure 1. Data Matrix (Source: Stake, 1967)

In the process of data collection for curricula within the scope of the model, the input, process, and product dimensions of the program are addressed within four fundamental categories. These are: intents, observations, standards, and judgments. Within this structure, intents form the starting basis of the program and represent the objectives that educators aim to achieve (Stake, 1967). These objectives, which reveal what educators plan to accomplish, are expected to be clearly linked to every stage of the program. In Stake's model, three types of intents stand out:

Input intents, include the attitudes, interests, and readiness levels that exist for both students and teachers before the instructional phase begins.

Process intents, encompass the methods, strategies, and tools to be implemented during the instructional process.

Output intents, evaluate not only the expected learning outcomes for students but also the effects of these outcomes on teachers, administrators, and other educational stakeholders.

The model also recommends that, before moving to the evaluation phase, evaluators should establish a holistic framework that considers these three types of intents (Woods, 1988).

Observations, are the tangible situations that emerge after the program is implemented. These observations can be made directly by the evaluator or through various measurement tools such as checklists, questionnaires, and tests. Stake (1967) states that an experienced evaluator should pay careful attention, particularly to the outcomes achieved by students, but also emphasizes the importance of focusing carefully on the process, input conditions, and other outputs.

Standards, refer to the general criteria used in the evaluation phase to determine what is sufficient and what is insufficient.

Judgments, include new arrangements and improvements made to the program based on the data obtained because of the evaluation phase.

The face of evaluation, in program evaluation, the concept of “face” represents the holistic structure of the evaluation process. According to Stufflebeam and Coryn (2014: 375–376), a comprehensive evaluation should include the following fundamental components:

1. Clearly defining the program to be evaluated and reaching a judgment about this program,
2. Collecting information on the intended and observed inputs, processes, and outcomes,
3. Clarifying the theoretical and logical framework on which the program is based,
4. Conducting analyses structured according to the principles of congruence and contingency,
5. Questioning the appropriateness of the criteria used and the validity of the evaluation judgments made,
6. Incorporating different data collection and analysis techniques into the process,
7. Using the findings both to contribute to the development process and for the purpose of final judgment.

In addition to these components, evaluation in Stake’s model is carried out in two main dimensions: **congruence evaluation** and **contingency evaluation**. Congruence evaluation analyzes the overlap between the predetermined objectives of the program and the outcomes that emerge in practice. In this analysis, the “intent” and the “observation” are compared for each cell, and the degree of overlap is determined. On the other hand, contingency evaluation examines the relationship between the desired processes and outputs and the prior conditions that influenced the achievement of these results. In this context, the central question is: “*What is the likelihood that the actual situation resulted from the prior conditions?*” (Stake, 1967).

Mathematics is one of the core subject areas that contributes to the development of students’ reasoning, problem-solving, and ability to connect with real-life situations, while also laying the groundwork for structuring higher-order thinking skills (Ministry of National Education [MoNE], 2018). Particularly, the middle school years are a critical developmental stage during which students systematically encounter abstract thinking for the first time and begin to develop these skills. Therefore, the 7th grade mathematics curriculum needs to be evaluated in terms of its appropriateness to the student level, the applicability of its learning outcomes, and the adequacy of learning environments.

The 7th grade mathematics curriculum is designed to enable students to relate to abstract concepts, develop solution strategies, and support higher-level cognitive skills. The learning outcomes included in the program cover content areas such as algebraic expressions, geometry, probability, and data, all of which support abstract thinking skills. However, the challenges teachers face during the field implementation of the program bring into question the extent to which the targeted outcomes of the program are being achieved (Yıldız & Güven, 2020). Therefore, Stake's Congruence–Contingency Model provides an important theoretical framework for evaluating the program. The congruence dimension of the model assesses the relationship between the objectives set in the program and the classroom practices and student performances, while the contingency dimension analyzes the extent to which the program can adapt to different situations that arise during the implementation process (Stake, 1967; Gözütok, 2006; Şahin, 2022).

Teachers, while implementing the 7th grade mathematics curriculum, may encounter problems such as insufficiency of materials and limited access to resources, differences in students' readiness levels, and lack of sufficient time during the process (Karakaya & Yıldırım, 2021). Due to these situations, when considering the contingency dimension of Stake's model, the necessity of improving the practice-oriented aspects of the program becomes evident. On the other hand, the fact that some teachers state that the learning outcomes are not fully appropriate to the cognitive level of the students makes it necessary to evaluate the program in terms of its congruence dimension (Demirtaş & Şahin, 2019).

Considering this information, evaluating the 7th grade mathematics curriculum in both the congruence and contingency dimensions will contribute to making the program more applicable, more functional, and more student-centered. Evaluation-based adjustments to be made in this direction will make teachers' classroom practices more efficient, while positively supporting student achievement and the applicability of the program.

The study was carried out based on teachers' experiences and perspectives, evaluating the 7th grade Mathematics Curriculum within the framework of Stake's Congruence–Contingency Model. The suitability of the program to students' levels, its applicability in classroom processes, the materials it supports, and the learning outcomes are directly related to the dimensions of this model. This is because Stake's model provides a functional theoretical basis both for making sense of teachers' experiences and for revealing the strengths, weaknesses, and areas in need of improvement in the current program.

Statement of the Problem

Curricula are carefully planned structures designed to ensure that the targeted outcomes are effectively imparted to students. However, the impact of a program in practice is determined not only by the content in the written texts but also by teachers' classroom experiences, the challenges they face during these experiences, and the interactions they establish with students' characteristics. In this context, evaluating programs solely based on the planned objectives is often insufficient. It is also of great importance for educators to know to what extent these objectives are implemented in the classroom environment and what variations emerge during the implementation process. Stake's Congruence–Contingency Model offers a comprehensive evaluation approach that considers both the consistency between the planned and the actual (congruence) and teachers' experiences regarding unexpected

situations that may arise during implementation (contingency). In Turkey, the extent to which the 7th grade mathematics curriculum has been evaluated within the framework of the model is limited. For this reason, it was deemed necessary to evaluate the program in terms of its congruence and contingency dimensions based on teachers' opinions, and this study was undertaken.

Purpose and Significance of the Study

The purpose of this study is to evaluate the 7th grade middle school mathematics curriculum, which is being implemented in schools in the 2024–2025 academic year, in the input, process, and product dimensions within the framework of Stake's Congruence–Contingency Model for program evaluation. The study aims to reveal the applicability and functionality of the curriculum in the field based on the opinions of a total of 15 mathematics teachers working voluntarily in public schools affiliated with the Hatay Provincial Directorate of National Education. In the study, the qualitative research method was chosen, and the case study design, one of the qualitative research designs, was employed. The research also aims to describe the challenges faced by teachers during implementation, the alignment of the program with its content and resources, and its reflections on students.

The study is important in that it reveals how the 7th grade mathematics curriculum currently in use is perceived by teachers and to what extent it can be implemented, while also identifying the strengths, weaknesses, and areas that need improvement in the program. The findings obtained from the research not only contribute to the curriculum development process but also provide concrete suggestions in areas such as content adjustments, diversification of resources, physical infrastructure conditions, and assessment systems. In this way, the research serves as an important reference point for evaluating the reflections of educational policies and curriculum updates in the field.

Research Problem Statement and Sub-Problems

In line with the aim of the study, the research problem statement was determined as: *"How is the 7th grade mathematics curriculum evaluated by teachers within the framework of Stake's Congruence–Contingency Model?"*

To facilitate the process of answering the research problem, sub-problems were identified in the study. The sub-problems, prepared according to the research problem, also influenced the preparation of the interview questions. The sub-problems of the research are as follows:

1. According to teachers' opinions, is the 7th grade mathematics curriculum adequate in terms of its suitability to the student level?
2. How do teachers evaluate the applicability of the 7th grade mathematics curriculum in the context of classroom processes?
3. What resources, materials, and supports do teachers need when implementing the 7th grade mathematics curriculum?
4. According to teachers, to what extent do students demonstrate learning achievement through the 7th grade mathematics curriculum?
5. What are teachers' suggestions for improving the 7th grade mathematics curriculum?

Limitations of the Study

The study was conducted within certain limitations, and the findings obtained were evaluated within this framework. Firstly, the research was carried out using the phenomenology method, a qualitative design, and the research data were obtained solely based on the opinions of middle school mathematics teachers. Therefore, the inability to include the perspectives of students, those involved in curricula, curriculum developers, and school administrators in the evaluation process constitutes a significant limitation.

Another limitation of the study is the number of participants. The study was limited to 15 mathematics teachers, and it cannot be said that the sample group fully represents schools from different regions or socio-economic differences. For this reason, the findings obtained focus on in-depth understanding rather than generalizability (Yıldırım & Şimşek, 2021).

In the study, a semi-structured interview form developed by the researchers was used as the data collection tool, and this form was prepared within the framework of specific themes and questions. This structure may limit teachers in expressing all their experiences and opinions. Furthermore, since the interviews were analyzed by the researcher, it should be considered that there may be a subjective influence of the researcher in the interpretations. While the interpretive role of the researcher is natural in qualitative research, this is nevertheless accepted as a potential limitation (Creswell, 2017).

The time when the research was conducted and the structural status of the curriculum at that time are also limiting factors. Any changes that may be made to the 7th grade mathematics curriculum over time may affect the currency of the findings obtained. Considering all these limitations, it should be considered that the interpretations and conclusions made within the scope of the research findings are valid only for this sample and context.

Contributions of the Study

This study makes an important contribution to the limited number of curriculum evaluation studies conducted in Türkiye with the aim of evaluating the 7th grade mathematics curriculum within the framework of Stake's Congruence–Contingency Model. The systematic examination of teachers' opinions using the “congruence” and “contingency” dimensions of Stake's evaluation model is one of the main aspects that make this research distinctive. This both reveals the reflection of the current curriculum in the field and provides a qualitative dataset based on a model-oriented evaluation approach (Patton, 2014).

Since the study was carried out directly based on the in-class experiences of program implementers, namely teachers, it provides strong inferences for field practice. The in-depth analysis of the difficulties teachers encounters during the process, the supports they need, and their views on the functionality of the program provides concrete data for both curriculum developers and education policymakers. In this respect, the study carries not only theoretical but also practical value. The research also presents an original example of evaluating curricula using the phenomenology approach, which is a qualitative research design, and has a structure that can serve as a methodological guide for similar studies in the future. This evaluation based on Stake's model aims to fill a gap in

the literature by providing empirical evidence regarding the applicability of the model within the context of Turkey (Creswell, 2017; Yıldırım & Şimşek, 2021).

This study also contributes to data-based decision-making processes aimed at the continuous renewal and improvement of curricula by guiding the in-class implementation of mathematics teaching and placing teachers at the center. Utilizing teachers' feedback and taking their opinions into account during the curriculum development process makes curriculum development more participatory and democratic. Therefore, the research constitutes a concrete step toward addressing such needs.

METHOD

Research Design

This study aims to evaluate the 7th grade mathematics curriculum based on teachers' opinions within the framework of Stake's Congruence–Contingency Model. The qualitative research method was used in the study. Qualitative research refers to studies that aim to obtain in-depth information based on individuals' experiences, perceptions, interpretations, and meanings (Creswell, 2017). Therefore, the study was structured in the phenomenology design, aiming to understand teachers' experiences and evaluations regarding the curriculum. Phenomenology is an approach preferred to understand a phenomenon that individuals have commonly experienced (Yıldırım & Şimşek, 2021). In this research, the phenomenon in question is the way the 7th grade mathematics curriculum is implemented in the classroom and the related perceptions of teachers.

Ethics committee permission

Hatay Mustafa Kemal University, Social and Human Sciences Ethics Committee, Ethics Committee approval was obtained with the decision numbered 09 and 08, dated 03.07.2025.

Study Group

The study group of this research consists of a total of 15 middle school mathematics teachers working in middle schools in the Samandağ district, affiliated with the Hatay Provincial Directorate of National Education, during the 2024–2025 academic year. Participants were determined through maximum variation sampling. This type of sampling aims to obtain rich data on how the phenomenon under study is experienced in different contexts (Patton, 2014). In this regard, variables such as teachers' seniority and place of duty were considered to ensure diversity. The professional experience of the participating teachers ranges from 1 to 25 years. This allows teachers to make comparative evaluations regarding both the current curriculum practices and the previous curricula. Teachers were included in the study on a voluntary basis. The names of the 15 teachers who voluntarily participated in the research were kept confidential in accordance with the principles and rules of confidentiality, and teacher names were coded as T1, T2, T3, ... T15, with these codes used in the findings section.

Data Collection Tool

In this study, research data were collected through a semi-structured interview form administered to teachers. The interview form was developed by the researchers based on a literature review and Stake's Congruence–Contingency Model. The questions in the interview form are directed toward the four main components of the curriculum: objectives, content, instructional process, and assessment–evaluation. In each section, open-ended questions reflecting the congruence and contingency dimensions were included. After the interview form was prepared, it was evaluated in terms of content by two field experts, and the necessary adjustments were made to finalize it. Before implementation, pilot interviews were conducted with four middle school mathematics teachers to test the clarity of the questions, and necessary corrections were made to finalize the interview form.

The analysis of the questions according to Stake's Congruence–Contingency Model is presented in Table 1.

Table 1. Matching of Interview Questions with the Congruence–Contingency Model

Question No	Research Question	Stake Model Dimension	Explanation
1	Do you think the 7th grade mathematics curriculum is sufficient in terms of its suitability to the student level? Why?	Congruence	The extent to which the curriculum objectives are appropriate for the student level is questioned.
2	Could you evaluate the applicability of the curriculum in the context of classroom processes? In your opinion, what are the strongest and weakest aspects of the program?	Contingency	The applicability of the curriculum is evaluated according to the situations encountered in the teaching environment.
3	What resources, materials, or other supports do you need when implementing this curriculum? Are these provided at a sufficient level?	Contingency	The adequacy of the resources and supports needed during the implementation process is evaluated.
4	What level of achievement do you think students demonstrate with this curriculum? Do the learning outcomes meet your expectations?	Congruence	The overlap between student achievements and the objective of the curriculum is examined.
5	What deficiencies, changes, or adjustments would you suggest for improving the curriculum?	Congruence & Contingency	Includes suggestions based on both the validity of the objectives and the needs during the implementation process.

Data Collection Process

The data related to the participants required for the research, that is, the interviews with the participants, were conducted face-to-face and one-on-one with the researcher in physical settings. A semi-structured interview form was used in the interviews for the research data, and the data collection process was carried out flexibly in terms of time and place. The interviews were shaped around the questions determined to serve the purpose of the research; however, to allow participants to express their opinions more freely, additional questions were asked when necessary. Each of the interviews conducted with a total of 15 teachers during the data collection process lasted approximately 25–35 minutes. All interviews were audio-recorded with the consent of the participants. The audio recordings were stored in an encrypted digital environment for data security and were kept accessible only to the researcher. After the interviews, the recordings were carefully transcribed by the researcher, and the obtained data were checked for accuracy and completeness. During the research process, special attention was paid to the ethical dimension of the study, and written consent forms were obtained from all participants before their participation in the research. The participants' identity information was kept confidential, and the answers given

during the interviews were evaluated using participant codes. In this process, in which the participants took part voluntarily, no coercive attitude was exhibited, and it was informed in advance that participants had the right to terminate the interview at any time they wished.

Data Analysis

The findings obtained in the study were interpreted in an orderly and meaningful manner within specific themes through the content analysis method. Content analysis was preferred to examine participants' opinions in depth, reveal common themes, and ensure that the data were interpreted as meaningful wholes. The data analysis process was carried out with an explicit and inductive approach in line with the aim of the research.

First, the written data recorded during the interviews were summarized using the descriptive analysis method and supported by direct quotations without detaching the participants' statements from their context. At this stage, initial observations of the data were made, and general trends were identified. Then, statements containing similar or related meanings were grouped, codes were created, and themes were derived from the data gathered under these codes. The coding process was carefully carried out by the researcher; using the constant comparative analysis method, the data obtained from each participant were analyzed both within themselves and in comparison, with the data of other participants. This approach was effective in ensuring consistency between the data.

The themes obtained because of the analysis were presented in a table; the relevant findings under each theme were explained and supported with direct quotations. In this way, both the reader was provided with direct insight into the participants' perspectives, and the principles of transparency and validity of the research were reinforced. The entire analysis process was carried out systematically, carefully, and in adherence to ethical principles, in accordance with the nature of qualitative data analysis.

Validity and Reliability

In this research, various strategies were employed to ensure the validity and reliability of the qualitative data collection and analysis process. Techniques recommended in qualitative research, such as prolonged engagement, member checking, and expert opinion, were carefully applied to increase the credibility of the study and the accuracy of the findings.

The researcher established a relationship with the participants in a way that would ensure trust throughout the data collection process and engaged in prolonged and meaningful interactions in line with the process of the research. This situation ensured that the data obtained were deeper and more sincere, increasing the validity of the data related to the content.

Within the scope of the member checking method, some of the findings obtained because of the interviews were shared with the relevant participants, and their feedback and approval were obtained. In this process, participants were enabled to evaluate whether their own statements were reflected accurately, and thus the validity of the interpretations was confirmed.

The coding process and the stages of analysis were defined in detail, and the way in which the methods used were applied was explained transparently. In this way, the traceability and auditability of the study were ensured. In the coding and theme development stages, inductive approaches were followed, and consistency was achieved through different perspectives.

To ensure the reliability of the study, support was received from a second researcher during the analysis process, and the inter-coder agreement rate was calculated, thereby increasing the reliability of the findings. The high level of similarity between the coding results strengthened the objectivity of the data obtained.

The researcher developed an awareness of the risk of personal biases being reflected in the research during the data collection and analysis processes and adopted a deliberate attitude aimed at limiting these effects. Decisions made, procedures carried out, and the analysis process were recorded in detail throughout the research, ensuring the auditability of the study. Thus, in terms of the transferability of the study, sufficient contextual information was provided to allow similar research to be conducted in similar environments.

All these approaches were carried out with a holistic understanding aimed at meeting the validity and reliability criteria of the study, and ethical principles were adhered to throughout the research process.

FINDINGS

In this section, the 7th grade mathematics curriculum is addressed under themes in accordance with the purpose of the study and the research questions, within the scope of Stake's Congruence–Contingency Model for Program Evaluation. The data obtained through data collection by gathering the opinions of the participants were evaluated using the content analysis method; the data related to each question are presented supported by themes, codes, and sample participant opinions.

Table 2. Opinions on the Suitability to the Student Level

Theme	Code	Participant	f
1. Overall Suitability of the Curriculum	Generally suitable	T1,T5,T7,T9,T13,T15	6
	Suitable but individual differences are important	T2, T8, T10	3
2. Areas Where Difficulties Are Experienced in Suitability	Abstract content is challenging	T3, T6, T7, T8, T9	5
	Intensity and lack of time	T4, T6, T14	3
	Lack of readiness	T7, T9, T11	3
3. Implementation and Motivation	Need for concretization and materials	T6, T13	2
	Unattractive, theoretical content	T12	1
	Should be supported with different teaching methods	T10, T15	2

Most of the participants stated that the general structure of the mathematics curriculum is suitable for the student level. Teachers indicated that most students do not experience significant difficulty in understanding the topics; this situation shows that the curriculum largely addresses the age and developmental level. For example, teacher T1 expressed general satisfaction by stating, “Yes, it is generally suitable for the level. Apart from some underperforming students, students do not have much difficulty in understanding the topics.” Similarly, teacher

T5 supported this view with the statement, *"The curriculum is suitable for the vast majority. Especially in the basic topics, students feel comfortable."*

In addition, some teachers emphasized that although the general structure of the curriculum is appropriate, individual differences among students should be taken into greater consideration. It was stated that some topics could be challenging, especially for students in need of remedial education. Teacher T2 expressed this situation with the words, *"I think it is generally suitable, but I have students who need remedial education, and they struggle."* Likewise, teacher T8 stated, *"For some students, the topics seem to be covered too quickly. It is necessary to proceed more slowly and with repetitions."*

Many teachers stated that abstract concepts, especially such as algebraic expressions and inequalities, are difficult for students to understand. It was expressed that such topics should be supported with more visualization and concretization. Teacher T3 expressed this situation by stating, *"Some topics are appropriate, but for example, algebraic expressions or inequalities can remain abstract for some students."* Similarly, teacher T7 made a similar comment by saying, *"Most mathematics topics are appropriate, but sections such as solving equations are abstract, and students have difficulty making connections."*

Some participants stated that the content density of the curriculum does not match the class hours, and that this situation, especially in topics such as geometry, becomes both challenging and time-consuming for students. Teacher T14 stated, *"The topics are too dense, and the time is short. Especially the geometry topic becomes challenging for students."* Teacher T6 also expressed the view, *"There is not enough time, some topics are rushed. This prevents in-depth learning."*

Some participants emphasized that students do not come with a sufficient level of readiness from the previous stage of education and therefore struggle with the topics in the current curriculum. Teacher T11 said, *"Some students struggle even with basic topics. I think the reason for this stems from the lower levels."* Teacher T9 supported this view with the statement, *"Readiness is very low. Especially computational skills are lacking."*

Some teachers emphasized the need for concrete materials and examples for abstract mathematical concepts to be better understood by students. Teacher T6 stated, *"Some abstract topics, especially in algebra, are not understood if they are not supported with examples."* Teacher T13 also expressed a similar opinion by saying, *"As long as there are no concrete tools, children have difficulty grasping the logic of operations."*

One teacher stated that due to some content being overly theoretical, negative effects on students' motivation were observed. Teacher T12 drew attention to this situation by saying, *"Some topics are overly theoretical and do not attract students' attention at all."*

Finally, some participants stated that teaching should be diversified in a way that suits each student's learning style. Teacher T10 said, *"It should be made flexible to use different learning styles by taking into account students' individual differences."* Teacher T15 emphasized the importance of alternative teaching methods by stating, *"More methods such as group work and gamification should be used."*

Table 3. Evaluation of the Curriculum in the Context of Classroom Applicability

Theme	Code	Participant Opinion	f
1. Strengths	Clarity, structured, and explicit nature of concepts	T1, T8	2
	Association with daily life	T2, T9, T15	3
	Use of materials and concretization	T3, T6	2
	Spiral structure	T7, T8, T10	2
	Clarity and explicitness of learning outcomes	T13	1
	Fewer number of topics and time advantage	T5	1
	Systematic progression	T10	1
	Integrity and connection between topics	T14	1
2. Weaknesses	Abstract content	T2, T7, T13	3
	Time management and lack of time	T6, T8, T9, T11, T12, T14	6
	Curriculum density	T3, T8, T14, T15	4
	Ignoring individual differences	T5, T10	2
	Activities not fully fitting the class	T2, T12, T15	3
	Disconnection in transitions between topics	T1	1
	Lack of materials	T2, T12	2
	Lack of student motivation	T15	1
3. Findings Related to the Implementation Process	Placing burden on the teacher and need for resources	T4, T13	2
	Need for repetition and effect of the learning chain	T3, T5	2
	Conceptual confusion	T9	1

Many teachers stated that the curriculum allows students to make connections with daily life and that this facilitates the understanding of concepts. For example, T2 said, *“It is the fact that the topics are related to daily life,”* while T9 stated, *“The strong aspect of the program is that it offers content associated with daily life.”* Similarly, T15 supported this view by saying, *“Its strong aspect is that connections are made with daily life.”* These statements indicate that the connection with daily life is a critical factor in increasing students’ motivation.

Participants also expressed that the spiral structure of the curriculum, which ensures continuity between grade levels, provides a meaningful learning process. For example, T7 said, *“Its spiral structure... students come to the 7th grade having learned,”* while T10 stated, *“The strongest aspect of the program is its systematic progression.”* T8’s emphasis that, *“The strongest aspect of the program is structural integrity,”* also reinforces this view.

Some teachers stated that the use of appropriate materials contributes to the concretization of concepts. T3 said, *“Counting chips and similar materials support the students,”* while T6 expressed the opinion, *“Activities and group work increase applicability.”* It is observed that such material-supported teaching particularly facilitates the understanding of abstract concepts.

The clear and comprehensible presentation of the learning outcomes has also emerged as a factor that facilitates the teaching process. For example, T13 expressed this view by saying, *“The strong aspect of the program is that the learning outcomes are clear. What is expected is very clear,”* while T1 indirectly referred to the clarity of the learning outcomes by stating, *“The structured nature of the concepts is a strong aspect.”*

Some teachers evaluated the small number of topics as a factor that makes the teaching process easier. T5 stated, *“The topics are few, and therefore there is time to teach the topic thoroughly without any time pressure,”* while

T14 indirectly said, *"In difficult topics, it is necessary to do frequent repetitions."* This situation allows teachers to work more in-depth with students on the topics.

Most teachers stated that the time allocated for achieving the learning outcomes and implementing the activities is insufficient. For example, T11 said, *"There is no time left for activities,"* T6 stated, *"Time management becomes difficult,"* and T9 expressed, *"I can say that the time is insufficient for the learning outcomes."* T8 said, *"When students do not understand, it is necessary to repeat, and this hinders time management,"* while T12 stated, *"The lack of time... students' active participation is not sufficient."* T14 also drew attention to a similar problem by saying, *"The intensity makes implementation difficult because there is not enough time left for activities."*

The abstractness of some topics and the overall intensity of the curriculum create difficulties in practice. T2 and T7 used similar expressions, *"The concepts remain too abstract,"* and T3 supported this view by stating, *"Its weakness is... the curriculum being too intensive."* T14 also said, *"The intensity is one of the weaknesses of the program."*

It was also stated that the program does not sufficiently take student differences into account. T10 said, *"However, it is insensitive to individual differences. This is among its weaknesses,"* while T5 stated, *"Since the topics are intertwined, when there is a deficiency, it becomes even more difficult to learn other topics."* This situation may cause students with different learning levels to not be able to participate in the process equally.

Some teachers stated that the activities are not fully compatible with the classroom environment and that there are disruptions in practice. T2 said, *"The applicability of the activities in the classroom is sometimes low,"* while T12 stated, *"The activities are not implemented at a sufficient level."* T13 emphasized this deficiency by saying, *"Some content has too few activities... there should be more activities in topics such as ratio."* In addition, it was stated that there is sometimes a disconnection in conceptual transitions. T1 said, *"There may be disconnections in transitions between topics,"* while T9 drew attention to this situation by stating, *"Sometimes there is conceptual confusion."*

Regarding observations about the implementation process, some teachers emphasized that there is too much individual effort required. T4 said, *"Too much burden falls on the implementer. Each teacher has to support it with different resources,"* while T13 stated, *"In some topics, the scope is limited; the teacher has to develop materials themselves."* This situation increases the workload of teachers and makes standardization in practice difficult.

Some teachers also drew attention to the lack of motivation. T15 said, *"Sometimes there is a lack of motivation. In this case, learning slows down,"* while T12 addressed the insufficiency of participation in the process by stating, *"I do not find students' active participation sufficient."*

Finally, due to the interconnected nature of the topics, the lack of prior learning creates problems. T5 stated, *"Since the topics are connected to each other, when there is a deficiency in one topic, it becomes even more difficult to learn the other topics,"* and T3 expressed the situation in a similar way by stating, *"Students find this topic*

difficult... the intensity of the curriculum.” Such deficiencies directly affect the retention and comprehensibility of new learning outcomes.

Table 4. Resource, Material, and Support Needs in Implementing the Curriculum

Theme	Code	Participants' Opinion	Frequency
1. Resource Shortage	Inadequacy of the MoNE textbook	T1, T7, T8, T9, T12, T14, T15	7
	Necessity of preparing extra materials	T1, T3, T7, T8, T9, T14	6
	Lack of supplementary books and content	T8, T10, T11, T12	4
2. Digital Infrastructure Problems	Lack of internet infrastructure	T6, T7, T10, T11, T15	5
	Problems with smartboards/digital devices	T8, T11, T14, T15	4
3. Turning to Alternative Resources	Use of question banks and test books	T5, T8, T9, T11, T15	5
	Educational websites	T5, T10	2
4. Need for Visual and Concrete Materials	Need for visual/game/material support	T3, T4, T7, T9	4
5. Inadequacy of EBA and Z-books	Insufficiency of digital content	T2, T6, T7, T15	4
6. Obligation to Produce One's Own Resources	Teacher develops resources	T1, T3, T7, T8, T9, T14	6

Based on the analyses conducted from teachers' opinions, it is observed that there are significant resource shortages during the teaching process. It is frequently emphasized that the MoNE textbook is inadequate in terms of content and variety of questions. Teachers state that this book fails to address students at different levels, and therefore they must produce their own materials. T8 clearly expressed this situation by saying, *“The MoNE textbook is already not sufficient,”* while T9 drew attention to the same problem by stating, *“The MoNE textbooks are not sufficient; I mostly create my own resources.”*

The inadequacy of activity books and applications also pushes teachers to prepare extra materials. T1 expressed this situation as, *“Activity books and applications I can use are insufficient. I have to prepare them myself,”* while T3 pointed to teachers' individual efforts by saying, *“We have to produce resources with our own means.”* Similarly, T10 stated, *“Supplementary books and practical content are lacking,”* and T11 emphasized the lack of materials that can be used in classroom practices by saying, *“I need supplementary resource books and smartboard content.”* This deficiency results in teachers spending extra time and effort producing resources, which makes the implementation of the teaching process more difficult and negatively affects teachers' motivation.

Digital infrastructure problems are also among the main issues faced by teachers. Insufficiencies in internet connectivity and technical malfunctions in digital tools such as smartboards become a significant obstacle for teachers who wish to access EBA content or digital resources. T6 voiced this deficiency by saying, *“The internet infrastructure is insufficient,”* while T7 expressed that the infrastructure problem is combined with the burden of resource production by stating, *“Problems in internet infrastructure... I must prepare the materials myself.”* Malfunctions in digital devices such as smartboards also prevent teachers from using technology effectively. T14 stated, *“The smartboard is usually broken,”* while T11 supported this concern by saying, *“There are technical problems in our school.”*

Under these conditions, teachers feel the need to turn to alternative resources. To overcome the inadequacy of the MoNE textbooks, question banks and test books are utilized. T9 expressed their own solution by saying, *“I make photocopies from question banks,”* while T8 stated, *“The Z-books and question banks we have students buy... are not sufficient,”* indicating that these resources are not always adequate either. In addition, teachers turn to educational websites and try to integrate these resources into their lessons. T5 emphasized the tendency toward digital resources by saying, *“I access tests from the Deerling site,”* while T10 drew attention to the structural barriers in accessing digital content by stating, *“When we want to use technology, we encounter infrastructure problems.”*

The lack of visual materials and game-based content is also among the problems frequently mentioned by teachers. Highlighting the contribution of these materials to the learning process, T4 said, *“I include games and visual materials,”* while T7 drew attention to the lack of concretization tools by stating, *“I need concrete materials.”* This deficiency particularly makes it difficult to learn abstract mathematical concepts.

Finally, criticisms of digital platforms such as EBA and Z-books are also noteworthy. Although these platforms are widely used, their content is considered insufficient in terms of instructional diversity and differentiation tailored to the student. T2 expressed this by saying, *“EBA content is sometimes not sufficient,”* while T15 clearly showed this inadequacy by stating, *“EBA also cannot provide sufficient support.”* The inability of digital tools to provide support for teachers and students is reflected in the necessity for teachers to produce resources. In summary, because teachers cannot find systematic and varied content support, they largely resort to developing materials through individual effort, which makes the teaching process difficult in terms of both time and motivation.

Table 5. Teachers’ Opinions on Students’ Achievement Levels with the Curriculum

Theme	Code	Participant Opinion	Frequency
1. Differences in Achievement	Achievement varies by student	T5, T8, T10, T11	4
	Achievement varies by topic	T3, T6, T7, T10	4
2. Factors Affecting Achievement	Low achievement in abstract topics	T3, T6, T7, T8, T11, T12, T15	7
	Visual support increases achievement	T6, T9	2
	Pandemic/disasters affected achievement	T4, T10	2
3. Problems in the Learning Process	Misconceptions and incomplete learning	T3, T4, T13, T14	4
	Lack of problem-solving skills	T5, T11, T15	3
4. General Achievement Evaluation	Moderate level of achievement	T3, T9, T13	3
	Expectations partially met	T5, T12, T14	3

According to teachers’ opinions, students’ academic achievement varies significantly depending on individual differences. In this context, many teachers emphasized that the level of achievement differs from student to student. For example, T5 drew attention to the difficulties of generalizing achievement by saying, *“Each student’s perception and willingness are different,”* while T8 pointed to the variation in achievement levels from one student to another with the statement, *“It is very difficult to define an average achievement.”* This situation reveals that the curriculum struggles to appeal equally to all students.

Some teachers stated that the level of achievement also varies according to the topic. T7 said, *“Achievement is higher in number topics, but they have difficulties in topics like algebra,”* while T10 stated, *“The level of achievement changes greatly from one topic to another,”* indicating that students display different learning performances in different topics. These findings highlight the importance of addressing abstract concepts through more concrete methods.

Among the factors affecting achievement, the difficulties experienced in learning abstract topics stand out. T15 said, *“Students have quite a hard time with abstract concepts,”* while T12 supported this by stating, *“Not all learning outcomes of students are achieved; especially abstract topics remain weak.”* In this context, the role of visual supports in increasing achievement also draws attention. T6 expressed this view by saying, *“When we do not explain with visuals, students have difficulty understanding,”* while T9 emphasized the need to diversify teaching methods by saying, *“If more activities and repetitions are done, they can be more successful.”*

It is also observed that external factors have an impact on students’ achievement levels. T4 drew attention to this effect by stating, *“Situations such as the pandemic and the earthquake reduced the students’ readiness,”* while T10 noted that environmental factors deepened achievement differences by stating, *“There are big differences between classes, perhaps due to the pandemic.”*

Observations regarding the learning process are also directly related to achievement levels. Teachers stated that students experience misconceptions. T13 said, *“There is confusion in concepts such as inverse proportion,”* while T3 drew attention to the difficulties in the teaching process by stating, *“Some topics are learned easily, but some cause them to make conceptual mistakes.”* In addition, it was frequently mentioned that students are inadequate in problem-solving skills. T11 said, *“Problem-solving skills are very weak,”* while T15 emphasized the need to improve this skill by stating, *“They are good in some areas, but they have difficulties in problem-solving.”*

Overall, the students’ level of achievement was evaluated as “moderate” according to the general opinion of the teachers. T13 stated, *“There are incomplete learnings, but we still see a moderate level of achievement,”* while T9 pointed to the importance of supportive teaching strategies with the statement, *“If there were time and repetition, achievement would increase.”* However, some teachers stated that their expectations were only partially met. T5 said, *“Some students grasp the topic, but for those who are uninterested, achievement is very low,”* while T14 drew attention to the imbalance in learning outcomes by stating, *“Most students do not reach the targeted achievement; learning is either rote or incomplete.”* This situation once again demonstrates how influential students’ individual characteristics and the teaching strategies used are on achievement.

Table 6. Teachers’ Suggestions for Improving the Curriculum

Theme	Code	Participant Opinion	f
1. Content Simplification and Density	The number of learning outcomes should be reduced	T3, T4, T6, T8, T10, T11	6
	Topic density should be reduced	T4, T10, T11, T14	4
	Topics should be made simple and clear	T3, T6, T10	3
2. Activity-Based and Practical Learning	Should include more activities	T5, T7, T8, T11, T13	5
	Should be practice-oriented	T7, T8, T13, T15	4
	Activities for concretization should be developed	T4, T9, T13	3

Theme	Code	Participant Opinion f	
3. Technology Integration	Should be supported with digital content	T1, T4, T15	3
	Topic-based digital videos should be provided	T5, T12	2
	Applications that will support students' individual study should be developed	T3, T15	2
4. Flexible and Modular Structure	The curriculum should be made modular	T2, T4	2
	Flexibility in time should be ensured	T3, T6, T11	3
	Structures suitable for individual learning pace should be included	T7, T9	2
5. Interdisciplinary Association	Integration with art and other subjects	T5	1
	Activities should encourage collaborative work	T5	1

When the opinions of the teachers are evaluated, it is revealed that the current curriculum causes certain difficulties for both students and teachers. Teachers state that the intensity of the content negatively affects both the teaching process and the students' level of comprehension. T3 emphasized the need to prevent superficial learning by stating, "The number of learning outcomes should be reduced, and the depth of the topics should be increased." Similarly, T10 remarked, "The topics should be made simpler and more understandable," indicating that the content should be more accessible to students. Supporting these views, T4 expressed that "The curriculum could be somewhat lightened," pointing out that the overall density makes the comprehension process more difficult for students. These statements highlight the importance of evaluating simplification not only in terms of content but also in terms of its impact on students' learning processes.

Most teachers advocate for increasing the activity-based structure in the curriculum to enable students to achieve meaningful learning. T11 suggested making the learning process more active by stating, "Activities should be increased for each learning outcome." T8 emphasized the importance of a structure that enables students to learn through experience and practice by stating, "It should be made more practice oriented." T13 highlighted the need for concretization to ensure the permanence of learning by stating, "Concrete application examples should be increased." These views demonstrate the necessity of learning environments that not only enable students to acquire knowledge but also to process and apply it.

In addition, the lack of technological support is frequently mentioned by teachers. T1 drew attention to the inadequacy of current digital opportunities by stating, "It is important to support it with digital content, but the environment for this is insufficient." T12 remarked, "Access to topic-based videos can be facilitated," indicating that digital platforms should become tools that support learning. T15 emphasized the need to support individual learning skills by stating, "Applications should be developed to support students' independent work." These statements reveal that technology should be considered not only as instructional support but also as a structure that personalizes learning.

Teachers also suggest that the curriculum should be made more flexible and sensitive to individual differences. T2 advocated for transforming the content into a meaningful structure by stating, "The curriculum outcomes should be made more modular," while T6 emphasized the need for greater teacher autonomy in classroom time management by stating, "Flexible structures should be incorporated regarding time." T9 pointed out that different learning speeds among students should be considered, stating, "Flexible activities should be added according to

individual learning pace.” These statements indicate that in the teaching process, not only the content but also the organization of the process and the differences among students should be considered.

Finally, teachers express that interdisciplinary work can increase student interest and learning motivation. T5 stated, “Each topic could have an activity; for example, mathematics could be linked with art or physical education,” highlighting that establishing connections between different subjects would support learning. The same teacher also drew attention to the importance of social learning environments by stating, “There should also be activities that allow group solidarity in the classroom.” These views reveal that linking subjects—especially mathematics—with other disciplines can positively influence both student interest and achievement levels.

CONCLUSION and DISCUSSION

The aim of this study is to evaluate the 7th-grade mathematics curriculum within the framework of Stake’s Congruence–Contingency Model based on teachers’ opinions, and to obtain data on the curriculum’s appropriateness to the student level, its applicability in the field, the adequacy of resources and materials, learning outcomes, and suggestions for improvement. This study, conducted according to the phenomenological design—one of the qualitative research methods—collected the views of 15 mathematics teachers. The data were obtained through content analysis, evaluated thematically, and the following results were reached.

Most of the interviewed teachers stated that the 7th-grade mathematics curriculum, in general terms, is appropriate for the developmental level of students; however, they emphasized that especially abstract concepts such as algebraic expressions and geometry do not fully align with the age and cognitive maturity level of some students. When considered within the scope of Vygotsky’s (1978) theory of the zone of proximal development, this indicates that students need structured guidance to make sense of such concepts.

In terms of applicability in the field, teachers stated that the scope of the curriculum is quite broad, and the learning outcomes are intensive, but the weekly lesson hours are insufficient for fully covering these outcomes. Therefore, the lack of time makes the teaching process more difficult and interrupts the activities planned daily by teachers. This finding points to the problem of “time limitation in the teachability of the curriculum,” similarly emphasized by Yıldırım and Şimşek (2021). However, among the strengths of the program, teachers mentioned its ability to relate to daily life and its structured system of learning outcomes. From this situation, it can be said that in Stake’s “congruence” dimension, the program largely achieves a balance between its objectives and student reality.

Participants agreed on the inadequacy of current resources. The lack of digital materials, the limited content of official platforms such as EBA, and the frequent technical problems encountered in schools were seen as significant factors hindering the effective implementation of the curriculum. According to Patton’s (2014) qualitative evaluation approach, such contextual limitations should be considered among the decisive external factors in the success of a program. In particular, the deficiencies experienced in material support and technological opportunities tire teachers, lead them to produce content on their own, and make it difficult for the program to achieve its intended outcomes.

From the perspective of learning outcomes, the participating teachers generally stated that students were able to acquire basic mathematical competencies; however, success rates decreased in outcomes that required the use of higher-order thinking skills. This finding shows that the learning outcomes targeted by the program are not equally achieved for every student in practice. Therefore, when evaluated within the context of the “contingency” dimension of the program, it indicates that the likelihood of achieving the intended learning results varies depending on contextual conditions.

In the study, the participating teachers stated that the curriculum should be made simpler, more applicable, and more flexible; they also noted that practice-based content should be increased and supported with digital materials. These suggestions provide direct reflections for strengthening both the “congruence” and “contingency” dimensions. In this context, it can be said that curriculum developers should reconsider curriculum design by taking teacher feedback into account.

RECOMMENDATIONS

The appropriateness of the program content to the student level should be increased. Most of the teachers participating in the study stated that some topics, especially those containing abstract concepts, are not suitable for, and even exceed, the students’ age and cognitive development level. In this context, it is recommended that abstract content be presented with more concrete examples and within a structured learning framework. In line with Vygotsky’s (1978) theory of the “zone of proximal development,” applying scaffolded structures to the curriculum, considering the importance of teacher guidance, will contribute to providing students with more support during the learning process.

The alignment between lesson duration and program scope should be reviewed. According to the views of the teachers participating in the study, the excessive number of learning outcomes creates an imbalance between weekly lesson hours and content density. Therefore, curriculum developers should simplify the learning outcomes by considering the weekly lesson duration and the scope of the outcomes. For this reason, a structure focused on increasing the quality of learning outcomes and allowing for in-depth learning should be adopted (Yıldırım & Şimşek, 2021).

Material and digital content support should be strengthened. Within the scope of Stake’s “congruence” and “contingency” dimensions, it is essential to provide the necessary resources for the effective implementation of the program, and this is of great importance. The participating teachers frequently mentioned the inadequacy of technological content and digital resources. Therefore, it is necessary to increase the number of structured and qualified digital teaching materials compatible with the curriculum and to improve the content diversity of platforms such as EBA (Patton, 2014; Creswell, 2017).

Activities aimed at developing students’ higher-order skills should be added. The participating teachers stated that although students acquire the learning outcomes in mathematics lessons, they have difficulties in higher-order thinking skills such as analysis, synthesis, and evaluation, as well as in cognitive skills. Accordingly, in order for the program to achieve its objectives, it is recommended to increase the number of applied and structured activities

aimed at developing higher-order cognitive skills such as problem-solving, reasoning, and critical thinking. In this regard, curricula should be reorganized according to Bloom's taxonomy.

Teacher opinions should be included in the curriculum development process. The findings of the study show that the experiences and opinions of the participating teachers regarding the implementation process are highly valuable for curriculum development. Based on this, it can be easily stated that the opinions received from teachers have an important place in curriculum development. Therefore, systematic feedback should be given to teachers during program updates. The deficiencies of the programs should be addressed according to the models in which teachers participate by providing their comments. This will both increase the functionality of the program and enhance the motivation of practitioners (Yıldırım & Şimşek, 2021).

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