Effectiveness of e-School System Application: Meta Synthesis Study

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Abstract: This research aimed to investigate the effectiveness of e-school system application by meta synthesis method. The paradigm of this research, which was carried out in the qualitative research approach, is interpretive paradigm based on the philosophy of nominalism. Qualitative studies conducted between 2010-2022 on the effectiveness of the e-school system, which was selected by criterion sampling, one of the purposive sampling methods, were included in the research. For this purpose, in order to reach the thesis and articles on the internet, "e-school" keyword was searched in the Council of Higher Education National Thesis Center, TR Index, Turkish Education Index, Academic Index databases. It was seen that the studies planned to be included in the research were qualitatively educational studies between 2010 and 2022, had a sampling within the borders of Turkiye, the articles were published in peer-reviewed journals, and the thesis was included in the thesis bank. Studies that could be suitable for meta-synthesis were carefully examined, and a total of 7 studies, 2 articles and 5 theses, which met the inclusion criteria of the research, were included in the research. The studies included in the study were examined by thematic analysis, descriptive analysis and content analysis in terms of publication year and type, purpose, research model, sampling selection, data collection tools, data analysis methods, distribution of working and processes of the e-school system and the results achieved. In the study, it was found out that the majority of studies were carried out in the recent decade, their objectives generally included the evaluation of e-school application in line with the opinions of stakeholders, a holistic single case and embedded multiple case designs were used in the context of the research model, sampling method were purposive sampling, semi-structured interview form were used for data collection tools, data were analyzed based on content analysis and the effectiveness of the application of the e-school system were at high level.

Keywords: E-school, Educational Technologies, Effectiveness, Meta Synthesis

INTRODUCTION

Rapid developments in the information technology world have led to many developments in all fields as well as in the field of education. Today, education and technology are integrated in many countries (Aydogan, 2011). Technology has brought conveniences to humanity in the field of education as well as in many fields. Technology, the role of which in education is indisputable with its hardware and theoretical dimension, also affects all areas of education (Isman, 2005). Therefore, in order to benefit from technology at the desired level in education, it is necessary to harmonize the developing technologies with the education and training system and ensure that they coexist (Akin & Bastug, 2005). Therefore, by expanding the internet and increasing computer literacy, governments develop strategies to meet the needs of the information society and encourage it to become an information society and try to produce new projects in accordance with these strategies (Meydanli, 2010). Given the rapid increase in the use of technology and technology in society today, Turkish Republic -TR - The Ministry of National Education should actively use technology as institutions that prepare students for life and be able to teach this to all stakeholders (Akkoyunlu, 2001).

The rapid spread of internet in the 1990s and the production and distribution of information that were incomparable to previous periods ensured the existence of the concept of management information systems and led to the most important steps of the e-government process (Carikci, 2010). Recently, institutions and organizations operating in all fields, especially education and commerce, have taken their place on the internet with the first letter of the word "e-" in order to

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adapt to the internet environment. The heavily functioning bureaucratic system tries to move all its organs to electronic environment with e-government applications, and e-government applications are spreading rapidly, especially in finance and commercial sectors (Gokdas&Kayri, 2005). The concept of e-government, which has gained importance especially with its restructuring efforts, comes across as a broad concept that refers to an integrated strategy, process, organization and technology (Cukurcayir & Eski, 2001).

In order to facilitate social life and activate daily business life in institutions, governments have been trying to switch to information technologies through e-transformation (Gokdogan, 2017). This system, which was created in the 2005-2006 academic year and created in electronic environment and defined as monitoring the e-school project, provides all stakeholders an opportunity to monitor information with exam results, absenteeism information, book reading information, weekly course schedule, student evaluations, behavior scores, announcements, documents received, etc. (MONE, 2008).

The e-school system is a useful application in many areas such as speeding up the working and processes of institutions, reducing stationery, saving time, ensuring fast communication, determining norm staff, distributing free textbooks. It provides the opportunity to fulfill the school system more quickly by ensuring that the bureaucracy is stripped of its slowness electronically (Gürel, 2016). With the e-school system, all the actions related to the school and the student were carried out and the administrators took their place in the e-school system, teachers had the opportunity to evaluate the students from all directions, and the parents managed to access all kinds of information related to their children (Saritas, Yildiz & Durusoy, 2013). Thanks to the implementation of the e-school system, more resources are allocated to education and training by reducing costs (Polat, 2011). However, in addition to bringing great advantages to internal and external stakeholders, the e-school system has also made it mandatory to use the system for change and innovation effectively (Gunbayi & Turan, 2013).

The aim of the system is to realize the objectives of the education system at the given level (Basaran, 2000). The effective and qualified use of the e-school system by all stakeholders can be explained by the concept of effectiveness. To use the e-school system effectively, it is important for all stakeholders who use the system to determine what the system is used for within the framework of system inputs and outputs and to serve the purpose in a qualified manner (Varlik & Gunbayi, 2020). As a result of the literature review, it is seen that the number of studies related to e-school is quite few and a research synthesis has not been made to determine whether these studies are effective in practice. Therefore, in this study, it was necessary to synthesize the results of their research on e-school. Because it is important to use research synthesis in the decision-making process, the results achieved in the primary studies are narrow and unsupscoped, so they are insufficient (Chalmers, Hedges & Cooper, 2002). Therefore, it is aimed to investigate the effectiveness of the studies on the e-school system in practice with the meta-synthesis method. In order to achieve this aim, the studies were interpreted and synthesized from a critical point of view, and answers were sought for the following questions.

1. What is the publication type and the year of publication of the studies on the effectiveness of the e-school system application distributed?

2. What is the distribution of the studies on the effectiveness of the e-school system application according to their aims?

3. What is the research model, sample selection, data collection tools and data analysis methods used in the studies on the effectiveness of the e-school system distributed?

4. What is the distribution of the working and processes of the e-school system in studies on the effectiveness of the e-school system application?

5. What kind of results are reached in the studies on the effectiveness of e-school system application?

METHOD

Research Design and Paradigm

In this research, it was aimed to investigate the effectiveness of the e-school system application with the meta-synthesis method. Meta synthesis is a research approach that collects, analyzes and integrates the findings of researches (Connett, 2018; Poggenpoel & Myburgh, 2008; Sandelowski & Barroso, 2003). The basis of this approach is making generalizations based on qualitative research findings (Jones, 2007; Xu, 2008). It is aimed to obtain a larger whole with interpretive transformations and to combine the findings in the first researches with the meta-synthesis method in a broad way. In this way, it is ensured that the findings and results are better understood with the developed themes and ideas (Sandelowski & Barroso, 2007; Welch, 2008). The paradigm of this research, carried out in the qualitative research approach, is the hermeneutic paradigm, which tries to empathize with what people feel and tries to reveal what people want in depth within the subjectivity of human life (Gunbayi, 2018; Gunbayi & Sorm, 2020).

Data Collection and Inclusion Criteria

In the meta-synthesis approach, in order to collect data, the purpose and problem of the research are determined, the relevant studies are determined in this direction and the inclusion criteria are determined and the studies are included in the research (Walsh & Downe, 2005). For this study, after determining the purpose and problem of the research, qualitative studies on e-school effectiveness between 2010-2022 were scanned between 01 November 2021 and 01 March 2022 with the criterion sampling technique, one of the purposive sampling methods. According to Patton (2018), purposive sampling provides the opportunity to conduct deeper research in order to determine special cases according to the purpose of the study. Purposive sampling methods are useful in many situations in discovering and explaining facts and events. This sampling technique is the inclusion of individuals who meet certain criteria in the scope of the research in accordance with the purpose of the research (Given, 2008). For this purpose, the keyword "e-school" was used in the databases of The Council of Higher Education National Thesis Center, TR Index, Turkish Education Index, Academic Directory to access theses and articles on the internet. It was determined that the studies planned to be included in the research should be qualitative studies in the field of education between the years 2010-2022, had a sample within the borders of Turkiye, to be among the articles in the refereed journals, and that theses should be in the thesis bank. As a result of the research, 28 studies that met these criteria were reached. When the summary parts of these studies were examined, quantitative studies were excluded from the research. Studies that

could be suitable for meta-synthesis were precisely examined. A total of seven studies, two articles and five theses, which met the inclusion criteria of the research, were included in the research.

Coding Process

Based on the aim and sub-problem of the research, the studies that were reached as a result of the scanning were determined whether they were suitable for the inclusion criteria of the meta-synthesis and they were prepared for analysis. Each study evaluation form was created and divided into main categories according to publication type, publication year, subject, purpose, method, findings and results. Theme and code list were created for each study to be examined, and the studies were coded as A-B-C-D-E-F-G. Codings are indicated with * at the beginning of the references.

Validity and Reliability of the Research

The inclusion and exclusion criteria of the studies to be included in the research were determined on the basis of the keywords to be used in the research and the research problem. First of all, the abstracts of the studies to be included were read and it was decided whether they were suitable for the inclusion criteria. In cases where the abstract part was not sufficient, the studies were carefully read by two researchers within the framework of the inclusion criteria and a final decision was made. In order not to make any mistakes in the coding process, a period of four months was allocated for the examination of the studies. The studies included in the study were re-coded by two independent researchers apart from the researchers of the study. Kappa analysis was performed to calculate the reliability of the coding processes. The intercoder reliability coefficient was found [κ=.818 t=3.753 p=.001]. This coefficient showed that the reliability between encoders was significantly high (Landis & Koach, 1977).

Analysis of Data

Meta-synthesis data analysis consists of the stages of deciding on the study to be done, choosing which studies to include in the research, reading the qualitative data, determining how the data are related to each other, transforming the data into each other, synthesizing the transformations and expressing the syntheses (Walters & De Gagne, 2009). Qualitative data analysis was used to relate data to each other, transform data, synthesize transformations, and express syntheses. Qualitative data analysis is divided into four groups as "thematic analysis, descriptive analysis, content analysis and analytical generalization" (Gunbayi 2019). Accordingly, in this research, the documents included in the research were subjected to content analysis after thematic and descriptive analyzes were done. Interpretation in qualitative research involves abstracting beyond codes and themes into the broader meaning of data. Interpretation is a process that begins with the development of codes, creating themes from codes and then organizing themes into larger units of abstraction to make sense (Creswell, 2015; Merriam, 2009; Patton, 2018).

Ethics Committee Approval

"Ethics committee approval is not required"

FINDINGS

The findings regarding the distribution type and publication year of the studies carried out on the effectiveness of the e-school system application are given in Table 1.

Table 1. Distribution of Studies on the Effectiveness of the e-School System Application in terms of Publication Year and Publication Type

Publication Type	Year of Publication	A	B	C	D	E	F	G
Article	2012				✓			
	2013						✓	
Thesis	2010	✓	✓					
	2011			✓				
	2012					✓		
	2021							✓

When the findings on the distribution type and publication year of the studies on the effectiveness of the e-school system application were examined in Table 1, the publication years of the studies with the publication type were 2012 and 2013 [D, F]. The publication years of the studies whose publication type was in the form of thesis were 2010, 2011, 2012 and 2021 [A, B, C, E, G]. When the publication years were examined in general, it was determined that the number of qualitative studies conducted in Turkiye on the effectiveness of the e-school system application was quite few.

The distribution of the studies on the effectiveness of the e-school system application according to their purpose is given in Table 2.

Table 2. Distribution of Studies on the Effectiveness of the e-School System Application in terms of Purpose

Purpose of The Study	A	B	C	D	E	F	G
Evaluation of the e-school application in line with the opinions of administrators, teachers, students and parents	✓	✓	✓	✓		✓	
To examine the opinions of secondary education institution stakeholders on the e-School Education Management Information System in terms of the positive aspects, negative aspects, design, operation and personal use of the system.					✓		
Evaluation of e-school applications based on administrator and teacher opinions in terms of accountability							✓

When the distribution of the studies on the effectiveness of the e-school system application was examined in Table 2, the general-purpose distribution of the studies consisted of the evaluation of the e-school application in line with the opinions of the administrators, teachers, students and parents [A, B, C, D, F]. Although it was common with the aims of previous studies, the aims of other studies were to examine the e-school system in terms of positive and negative aspects, design, process and personal dimensions [E], and to evaluate e-school applications based on the opinions of administrators and teachers in terms of accountability [G]. When the aims of the studies included in the research were evaluated in general, the application of the e-school system were evaluated in terms of administrators, teachers, parents, students, briefly all stakeholders using this system. However, the studies were not divided into sub-objectives regarding the effectiveness of the e-school system in practice, except for two studies. In these two studies [E, G], the accountability aspect of the e-school system, the positive aspects of the system in practice, the

negative aspects of the system, the design of the system, and its process were put forward as a goal. In other studies, it was determined that the effectiveness of the [A, B, C, D, F] e-school system in practice were handled in line with a general purpose.

The distribution of studies on the effectiveness of the e-school system application according to the research model, sample selection, data collection tools used, and data analysis methods used is given in Table 3.

Table 3. Distribution of Studies on the Effectiveness of E-school System Application by Research Model, Sample Selection, Data Collection Tools and Data Analysis Methods

Methods		A	B	C	D	E	F	G
Research Model	Holistic Single Case Design	✓					✓	
	Phenomenology Design							✓
	Embedded Single Case Design		✓		✓			
	Mixed Methods Design			✓				
	Mixed Methods Case Study Design					✓		
Sample Selection	Purposive Sampling		✓	✓	✓	✓		
	Criteria Sampling	✓					✓	
	Criteria and Maximum Diversity Sampling							✓
Data Collection Tools	Individual and Focus Group Interview						✓	
	Semi-Structured Interview Form	✓	✓	✓	✓	✓		✓
Data Analysis Methods	Descriptive Analysis				✓			
	Content Analysis		✓		✓	✓	✓	✓
	Thematic Analysis, Descriptive Analysis, Content Analysis	✓						

When the distribution of studies on the effectiveness of the e-school system application according to the research model, sample selection, data collection tools and analysis methods was examined in Table 3; holistic single case design [A, F] phenomenology design [G] embedded single case design [B, D] mixed methods design [C] and mixed methods case study design [E] constituted the research model of the studies. The sample selection of the studies consisted of purposive sampling [B, C, D, E] criterion sampling [A, F] criterion and maximum variation sampling [G]. Individual and focus group interview [F] semi-structured interview form [A, B, C, D, E, G] constituted the data collection tool of the studies. The analysis methods of the studies were descriptive analysis [C] content analysis [B, D, E, F, G] thematic analysis, descriptive analysis, content analysis [A]. When the studies included in the research were evaluated in general, the research model of the studies is holistic single case design, embedded single case design and mixed methods design. In general, the sample selection in the studies was purposive and criterion sampling. The data collection tool used in the studies included in the research was generally a semi-structured interview form. The analysis methods used were generally content analysis. According to Gunbayi (2019), qualitative data analysis is divided into four groups as "thematic analysis, descriptive analysis, content analysis and analytical generalization". When the studies included in the research were examined in detail, it was seen that descriptive analyzes were used in all studies, but it was determined that only content analysis was specified in the analysis method explanations of the studies. In addition, when the study [A] was examined in detail, it was seen that all thematic, descriptive and content analyzes of qualitative data analysis were used. From another point of view, content analysis in [B, D, E, F, G] studies where content analysis was indicated to be used as an analysis method was not carried out in a way to reveal all the elements of content analysis of

qualitative data analysis. Although thematic and descriptive analyzes were put forward in the studies, it was determined that the relationship, comparison, similar and different aspects of these analyzes with each other were not revealed in detail. On the other hand, according to Yin (2017), starting from the view that a case study can be done using both quantitative and qualitative data, it was determined that the [E] study was conducted in accordance with a mixed methods case study using both quantitative and qualitative data.

In the studies on the effectiveness of the e-school system application, the findings of the themes and sub-themes related to the working and process of the e-school system are given in Table 4.

Table 4. Themes and Sub-Themes Regarding the Working and Process of the E-School System in Studies on the Effectiveness of the E-school System Application

Theme	Sub-theme	A	B	C	D	E	F	G
Information Entry, Branch, Enrollment and Photo Procedures	Enrolling Students	✓	✓	✓				
	Access to Announcements	✓	✓	✓	✓		✓	✓
	Enrolling a Branch	✓	✓	✓				
	Final Enrollment	✓	✓	✓		✓	✓	✓
	Cancelling Enrollment		✓	✓		✓		
	Attaching Photo	✓	✓	✓				
Absenteeism and Course Procedures	Making an Absence Entry	✓	✓	✓	✓		✓	✓
	Receiving a Letter of Absence		✓	✓	✓		✓	
	Course Start-end Times	✓		✓				✓
	Identifying Elective Courses		✓	✓				
	Creating the Curriculum	✓	✓	✓			✓	
	Assigning Course Teachers	✓	✓	✓				
Grade and Class Repetition Processes	Score Entry	✓	✓	✓	✓	✓	✓	✓
	Creating Exam and Project Dates	✓	✓	✓	✓	✓		✓
	Writing the Teacher Opinion	✓	✓	✓				
	Making Grade Retention Decisions	✓	✓	✓				
Social Events and Book Procedures	Defining Club Names	✓	✓	✓				
	Social Activity Login	✓	✓	✓	✓	✓	✓	
	Identifying Social Activities	✓	✓	✓	✓	✓	✓	
	Creating a Class Library		✓	✓			✓	✓
	Entering Students' Book Information	✓	✓	✓	✓	✓	✓	✓

When the findings of the themes and sub-themes related to the working and process of the e-school system in the studies on the effectiveness of the e-school system application were examined in Table 4; in the theme of "information entry, branch, enrollment and photo procedures", sub-themes were identified as "enrolling students, access to announcements, enrolling a branch, final enrollment, cancelling enrollment and attaching photo", in the theme of "absenteeism and course procedures" as "making an absence entry, receiving a letter of absence, course start-end times, identifying elective courses, creating the curriculum and assigning course teachers", in the theme of "grade and class repetition procedures" as "score entry, creating exam and project dates, writing the teacher opinion and making grade retention decisions" and in the theme of "social activities and book procedures " as "defining club names, entering social activities, defining social activities, creating a class library and entering students' book information". When the studies included in the research were examined in general, the work and functioning of the e-school system were divided into general themes as information entry, branch, registration, picture transactions, absenteeism and course procedures, grade and class repetition procedures, social

activities and book transactions. As indicated in these themes and sub-themes, the e-school system was used by education administrators, teachers, students, parents, and all stakeholders, and all work and procedures related to students were carried out in a standard way.

The findings of the themes and sub-themes related to the results of the studies on the effectiveness of the e-school system application are given in Table 5.

Table 5. Themes and Sub-Themes Related to the Results of the Studies on the Effectiveness of the e-School System Application

Theme	Sub-theme	A	B	C	D	E	F	G
Negative Effects of -School System Application	Inability to Access the System		✓	✓	✓	✓		
	Internet Connection Problems	✓	✓	✓		✓		
	Dependency on Central Authority				✓	✓			
	Lack of Infrastructure			✓	✓	✓		
	End of Term Intensity			✓		✓		✓
	Failure to Login to the System on Time		✓		✓			
	Speed and Server Problems			✓	✓	✓		
	Parents' Not Being Aware of the System	✓	✓		✓		✓	
	Impractical of Book Entry	✓			✓			
	Lack of Student Address		✓	✓	✓			
	Same Design in All Classes	✓			✓	✓		
Positive Effects of E-School System Application	Saving Time and Money	✓	✓	✓	✓	✓	✓	✓
	Ensuring Standardization	✓	✓			✓	✓	✓
	Elimination of the margin of error	✓	✓	✓		✓	✓	✓
	Parents' being able to follow their children	✓	✓	✓	✓	✓	✓	✓
	Regular Data Entry	✓		✓	✓	✓	✓	✓
	Access to Previous Period Statistics			✓		✓		
	One-Stop Access to Most Information	✓		✓	✓	✓		✓
	No Need for a Year-End Certificate	✓			✓	✓	✓	
	Being Accountable					✓		✓

When the findings of the themes and sub-themes related to the results of the studies on the effectiveness of the e-school system application were examined in table 5, the "negative effects of the e-school system application" theme included sub-themes as "inability to access the system, internet connection problems, dependency on central authority, lack of infrastructure, end of term intensity, failure to login to the system on time, speed and server problems, parents' not being aware of the system, impractical of book entry, lack of student address, the same design in all classes" and the theme of "positive effect of e-school system application" as "saving time and money, ensuring standardization, elimination of the margin of error, parents' being able to follow their children, regular data entry, access to previous period statistics, one-stop access to most information, no need for a year-end certificate, being accountable.

In the studies included in the research, the negative effect of the application of the e-school system was seen as inability to access the system [B, C, D, E], internet connection problems [A, B, C, E] dependency on central authority [C, D] lack of infrastructure [C, D, E] end-of-term intensity [C, E, G] failure to login to the system on time [B, D] speed and server problems [C, D, E] parents' not being aware of the system [A, B, D, F] impractical of book entries [A, D] lack of student address [B, C, D] the same design in all classes [A, D, E].

When these studies were examined, it was seen that the general negative aspects of the effectiveness of the e-school system were that the system did not work, internet connection problems, parents' not being aware of the system were mentioned more.

If these problems continue, it can be said that an existing coordination between users and stakeholders cannot be achieved because the operation of the e-school system, speed, elimination of server problems, solving infrastructure deficiencies and solving internet connection problems are the basic elements that will increase the effectiveness of the system. On the other hand, schools can be divided into hamlets, villages, towns, districts, provinces, etc. taking into account their level of development to ensure that parents should be aware of the system, taking into account their level of development. In the studies included in the research, it was determined that the design of the e-school system at all educational levels was evaluated negatively. For this, a design can be developed according to the education levels by making the necessary decisions. The fact that the book entries were not practical, and the addresses of the students were not accessible are also evaluated negatively by the users. In general, the publication years of studies on e-school covered the years 2010, 2011, 2012, 2013 and 2021. For this reason, it was seen that the negative aspects of previous studies were not included in the 2021 study. However, in this study, the end-of-term density as a negative effect of the e-school system were of consideration. Since the Ministries of Education in the countries were trying to make their information technology infrastructures more equipped during the pandemic process that affected the whole world, we can say that the Ministry of Turkish National Education also developed and tried to make it qualifiedthe infrastructure problems of the e-school information system before and after 2021.

The positive effect of the application of the e-school system in the studies included in the research was seen as saving time and money [A, B, C, D, E, F, G] ensuring standardization [A, B, E, F, G] elimination of the margin of error [A, B, C, E, F, G], parents' being able to follow their children [A, B, C, D, E, F, G], regular data entry [A, C, D, E, F, G], access to previous period statistics [C, E], one-stop access to most information [A, C, D, E], no need for a year-end certificate [A, D, E, F] and being accountable [E,G]. When these studies were examined, we can say that the stakeholders were generally satisfied with the effectiveness of the e-school system. One of the positive aspects of technology is time and financial savings because the information systems devices used in education systems can offer time and financial savings to their stakeholders.

With the e-school system, articles, charts, and irregular data that take days to be sent to decision makers can be carried out quickly and in a very short time, thanks to this system. On the other hand, education levels are primary, middle and secondary education, etc. it is expected that the e-school system will have a standard effect on all stakeholders, considering the fact that the number of students exceeds millions in the Turkish Education System. Since all institutions and levels have common contents, standardization of the e-school system becomes inevitable. Stationery operations that were tried to be done manually were eliminated thanks to this system. The information expected to exist in the e-school is supported by structures such as MERNIS - Centralized Civil Registry System-, which are the sub-structures of the e-government, and thus the accuracy of the data is tested via such structures. In this way, the inclusion of unrealistic data in the system is prevented and it also increases the accountability level of the users. Education administrators and teachers can enter the e-school system with their secure usernames and passwords, and can make regular data entry in all authorized areas. In addition, the chronology of the transactions can be followed by keeping the log records of the works and transactions. Thanks to the e-school system, parents also save time and money. In this way, by following all data and

procedures related to their children on the computer, parents can see and track their success, activities, books read, grades, absenteeism, certificates, etc. from the moment they log in the application. Accessing previous period statistics and most information from a single source with the e-school system can be considered as another positive feature. With the introduction of the e-school system, archiving and paperwork disappeared, and it has become easier for education stakeholders to able to make decisions and give guidance related to a student's success, social status, etc. Because it is possible for decision makers to reach all statistical information about a student from pre-school to the end of secondary education from a single source, this also strengthens coordination with external stakeholders.

DISCUSSIONS, CONCLUSION and RECOMMENDATIONS

This research aimed to investigate the effectiveness of the e-school system application with the meta-synthesis method. For this purpose, in order to access theses and articles on the internet, the databases of The Council of Higher Education National Thesis Center, TR Index, Turkish Education Index, Academic Directory were scanned with the keyword "e-school". The criteria were determined that the studies planned to be included in the research should be qualitative studies in the field of education between the years 2010-2022, have a sample within the borders of Turkiye, the articles should be published in peer-reviewed journals, and the theses should be in the thesis bank. Studies that could be suitable for meta-synthesis were carefully examined, and a total of 7 studies, 2 articles and 5 theses, which met the inclusion criteria of the research, were included in the research. As a result of the literature review, it was determined that the number of studies related to e-school was quite few, and that there was no research synthesis to determine whether these studies were effective in practice. Therefore, in this study, the necessity of synthesizing the results of the researches on e-school emerged. Because the use of research syntheses in the decision-making process was important, the results obtained in primary studies did not provide benefits because they were narrow and unsupscoped (Chalmers, Hedges & Cooper, 2002). For this reason, questions were formed to seek answers to the results obtained with the meta-synthesis method of the effectiveness of the studies on the e-school system in practice, related to publication year and type, purpose, research model, sample selection, data collection tools used, data analysis methods used, working and procedures of the e-school system.

When the findings on the distribution of the publication type and publication year of the studies on the effectiveness of the E-school system application were examined; It was understood that the number of qualitative studies conducted in Turkiye was quite few. When the distribution of the studies on the effectiveness of the e-school system application according to their objectives was examined; it was seen that these studies aimed to evaluate of the e-school application in line with the opinions of administrators, teachers, students and parents (Cetinoglu, 2011; Gunbayi & Turan, 2013; Kızılboğa, 2010; Kızılboğa & Erdoğan, 2012; Turan, 2010), to examine of the opinions of secondary education institution stakeholders on the e-School Education Management Information System in terms of positive aspects, negative aspects, design, operation and personal use of the system. (Doğu, 2012) and to evaluate e-school applications based on the opinions of administrators and teachers in terms of accountability (Arican, 2021).

When the research model, sample selection, data collection tools and data analysis methods used in the studies on the effectiveness of the e-school system were examined; it was seen that holistic single case design (Gunbayi & Turan, 2013; Turan,2010) embedded single case design (Kızılboğa, 2010; Kızılboğa & Erdoğan, 2012) mixed design and mixed case study (Cetinoğlu, 2011; Doğu,

2012) and phenomenology design (Arican, 2021) were used; when the sample selection distributions examined; purposive sampling (Cetinoglu, 2011; Doğu, 2012; Kizilboga, 2010; Kizilboga & Erdogan, 2012) criterion sampling (Gunbayi & Turan, 2013; Turan, 2010;) criterion and maximum variation sampling (Arican, 2021) were used; when the distributions of data collection tools examined, semi-structured interview form (Arican, 2021; Cetinoglu, 2011; Dogu, 2012; Kizilboga, 2010;; Kizilboga & Erdogan, 2012; Turan, 2010) and focus group interview (Gunbayi & Turan, 2013) were used; when the analysis method examined; content analysis (Arican, 2021; Dogu, 2012; Gunbayi & Turan, 2013; Kizilboga, 2010;; Kizilboga & Erdogan, 2012; Turan, 2010) descriptive analysis (Cetinoglu, 2011), thematic analysis, descriptive analysis, content analysis (Turan, 2010) were used.

In studies on the effectiveness of the e-school system application, in general holistic and embedded single-case design were used as a research model, purposeful sampling as sample selection, semi-structured interview form as data collection tool, and content analysis as data analysis method.When the studies included in the research are examined in general, it was determined that the working and process of the e-school system were grouped under general sub-themes as information entry, branch, enrollment and photo procedures, absenteeism and course procedures, grade and class repetition processes, social events and book procedures. It was grouped under two main themes as negative and positive effects in the results of the studies on the effectiveness of the e-school system application. In the studies included in the research, the negative effect of the application of the e-school system were seen as inability to access the system (Cetinoglu, 2011; Dogu, 2012; Kizilboga, 2010; Kizilboga & Erdogan, 2012) internet connection problems (Cetinoglu, 2011; Dogu, 2012; Kizilboga, 2010; Turan,2010) dependence on central authority (Cetinoglu, 2011; Kizilboga & Erdogan, 2012), lack of infrastructure (Cetinoglu, 2011; Dogu, 2012; Kizilboga & Erdogan, 2012), end-of-term intensity (Arican, 2021; Cetinoglu, 2011; Dogu, 2012), failure to login to the system on time (Kizilboga, 2010; Kizilboga&Erdogan, 2012), speed and server problems (Cetinoglu, 2011; Dogu, 2012; Kizilboga & Erdogan, 2012), parents' not being aware of the system (Gunbayi & Turan, 2013; Kizilboga, 2010; Kizilboga & Erdogan, 2012; Turan, 2010) impractical of book entry (Kizilboga & Erdogan, 2012; Turan, 2010), lack of student address (Cetinoglu, 2011; Dogu, 2012; Kizilboga, 2010; Kizilboga & Erdogan, 2012), and the same design in all classrooms (Kizilboga & Erdogan, 2012;Turan, 2010).

The positive effect of the application of the e-school system in the studies included in the research; were seen as saving time and money, eliminating the margin of error, parents' ability to follow their children, regular data entry (Arican , 2021; Cetinoglu, 2011; Dogu, 2012; Gunbayi & Turan, 2013; Turan, 2010; Kizilboga, 2010; Kizilboga & Erdogan, 2012), ensuring Standardization (Arican, 2021; Dogu, 2012; Gunbayi & Turan, 2013; Kizilboga, 2010; Turan, 2010), access to previous period statistics (Cetinoglu, 2011; Dogu, 2012), one-stop access to most information (Cetinoglu, 2011; Dogu, 2012; Kizilboga & Erdogan, 2012; Turan, 2010) no need for a year-end certificate (Dogu, 2012; Gunbayi & Turan, 2013; Kizilboga & Erdogan, 2012; Turan, 2010) being accountable (Arican, 2021; Dogu, 2012). When the studies included in the research were examined in general, it was seen that the stakeholders were generally satisfied with the e-school system regarding the effectiveness of the e-school system.

In the light of the results obtained, suggestions for the effectiveness of e-school application are given in detail below.

- It was found that the number of qualitative studies on the effectiveness of the e-school application was quite few, so the number of qualitative studies on e-school should be increased.

- Measures should be taken against the intensity that may occur at the end of the semester regarding the e-school system.
- Findings were found that the same design should not be used in the education levels of the stakeholders using the e-school system. In order to overcome this, decision makers need to make the necessary design arrangements according to the education levels.
- In the studies included in the research on the e-school system, findings related to internet connection problems, speed and server problems were found. Necessary infrastructure deficiencies should be eliminated in order to provide access to information technologies in settlements where educational institutions are located.
- In the studies included in the research on the e-school system, it was found that parents should be informed about the system. Seminars, courses, etc., by taking the necessary precautions for parents to know the e-school system should be regulated.

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Ethical Approval

In the writing process of the study titled "**Effectiveness of E-School System Application: Meta Synthesis Study",** the rules of scientific, ethical and citation were followed; it was undertaken by the authors of this study that no falsification was made on the collected data. "Academia Journal of Educational Researchand Editor" had no responsibility for all ethical violations to be encountered, and all responsibility belongs to the authors and that the study was not submitted for evaluation to any other academic publishing environment.

Ethics Committee Approval

"Ethics committee approval is not required"