

## **Evaluation of Digital Content-Supported Transformation from Teachers' Perspectives within the Scope of 2023 Education Vision**

**Elif ERTEM AKBAŞ<sup>1</sup>**

Van Yüzüncü Yıl University

**Hayati ÇAVUŞ<sup>2</sup>**

Van Yüzüncü Yıl University

### **Abstract**

The present study aimed to evaluate the transformation supported with digital contents and skills in the field of education in terms of its strong aspects, weaknesses, the related opportunities and suggestions from the perspectives of teachers within the context of 2023 Education Vision. In the study, the case study method, one of qualitative research approaches, was applied. The study group, which was determined using the purposeful sampling method, included 27 teachers from different fields of teaching who participated in the conference of “Our Educational Practices and 2023 Education Vision”. In the study, semi-structured interview questions prepared by four academicians' expert who were in their fields and who organized the conference were used as the data collection tool. The qualitative data collected via the interviews were first grouped with SWOT analysis. Following this, the qualitative data transferred into the computer environment were analyzed using the content analysis method. The data examined in terms of their contents and meanings within the scope of SWOT analysis were gathered under four main categories: “strong aspects” and “weaknesses” of educational technologies and of the digital content, related “opportunities” and “suggestions against threats”. The results revealed that regardless of their fields of teaching, most of the teachers reported views about EBA (Education Information Network) for all the categories and that educational technologies and digital content involved both opportunities and threats. Considering the findings and the teachers' views, the educational dimension of the study was discussed, and suggestions regarding how to make the transformation process more effective were put forward.

**Keywords:** 2023 Education Vision, Transformation Supported with Digital Content and Skills, EBA, Teachers' Views, SWOT Analysis

**DOI:** 10.29329/epasr.2020.270.14

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<sup>1</sup> Assist. Prof. Dr., Faculty of Education, Van Yüzüncü Yıl University, ORCID: 0000-0002-4004-1697

**Correspondence :** elifertem@yyu.edu.tr

<sup>2</sup> Assoc. Prof. Dr., Faculty of Education, Van Yüzüncü Yıl University, ORCID: 0000-0001-5602-5221, hcavus@yyu.edu.tr

## Introduction

Today, we are exposed to a process of rapid changes in a number of areas including especially the industrial life and education in our country. In this process of changes, the technological substructure, the tools used and the production methods are always being developed with new applications and new products. The fact that the human-technology interaction is at its highest level due to the rapid developments in technology has forced everyone to take serious actions for changes in every field. In this respect, these changes and developments have guided the studies in the field of education as well. In line with the facilities brought by the innovations especially in the field of technology, considerable steps have been taken regarding the technological sub-structure in relation to educational processes. These steps have made it necessary to conduct studies on the effective integration of instructional technologies into the education process (Alabay, 2015; Aydınöz, Sözcü and Akbaş, 2016; Cüre and Özdener, 2008; Ertem Akbaş, 2016; Eryaman, 2007; Karataş, Alcı and Karabıyık-Çeri, 2015). In this respect, parallel to the developments in technology, several projects (FATİH, 2016) and studies like 2023 Education Vision (MNE, 2016, 2018) have recently been conducted in our country for the purpose of making the teaching and learning process more permanent and effective thanks to modern teaching methods, which allow students to reach the necessary information themselves and which put the teacher in the position of a guide (Halmatov, Okur-Akçay and Ekin, 2017). These projects and studies focused on products, intelligence, information network, technology literacy, critical thinking, problem solving, communication, cooperation, flexibility, adaptation, global competencies and 21<sup>st</sup> century skills (MNE, 2018; Sayın and Seferoğlu, 2016). For the purpose of establishing a system to help individuals acquire these skills, which change in accordance with the current conditions and which do not have a certain content, it is now necessary to develop and evaluate the contents taught in the education process. In this respect, obviously, the most basic contents that should necessarily be developed and evaluated in learning processes are transformations supported with digital contents and skills. The reason for this necessity is that the development of digital interactive sources and skills which have been prominent in the educational industry in the world in recent years and which can be transformed in line with the new-generation learners' perceptions and their pace of learning constitutes the basis of the economic growth and digital economy strategies (European Commission, 2014). Today, students are defined as "21<sup>st</sup> century learners ", "students of the new millennium ", "Y or Z generation ", "V (virtual) generation", "Internet generation ", "technological natives " and "digital natives " (Prensky, 2001). "Digital natives" are referred to as the generation born into the technology culture and the technology itself, while "digital immigrants" include mostly adult individuals (born before 1980) who have got introduced to technology later and who try to exist in the digital world (Bayne and Ross, 2007; Prensky, 2001). Based on this definition, today's students could be said to be digital natives. This situation emphasizes the importance of digital interactive sources, skills and digital contents.

Digital contents are highly interactive materials which prioritize the subject unity during lessons and the conceptual depth in the learning process based on the pedagogical approach. These contents are related to real life and are new-generation materials in multiple disciplines which allow visualization of a number of abstract concepts hard to concretize and to teach in physical environments and which are evaluated and supported with related applications (animations, games, simulations, interactive experiments and so on) (MNE, 2018). Considering such advantages of these materials as giving importance to students' pace of learning and their needs and providing them with equal opportunities in appropriate conditions, these materials have a great strategic importance in terms of education. In addition, an unproductive instructional material could easily be renovated with the help of the flexibility provided by digital contents. When these opportunities and the current development of technology are taken into account, active use of digital contents in the education process is obviously inevitable. Moreover, considering the fact that technology is indispensable for children of this era, it could be stated that, as mentioned by Güçlüoğlu (1985), if we teaching in the way we did yesterday, then we are stealing something from our children's future. In this respect, in line with the developments in technology that we integrated into the education process, it is primarily necessary to evaluate the transformation supported with digital contents. While doing this evaluation, in order to make the best use of the opportunities provided by technology and digital education, it is important to reveal strong aspects, weaknesses and opportunities related to educational technologies and digital contents and to put forward related suggestions in the light of these evaluations.

Considering the fact that information and innovation can generally be formed based on a well-developed sub-structure of information (Slater and Tacchi, 2004), it is important for teachers, active executors of the learning process, to evaluate the development of the transformation supported with digital contents and skills in the learning processes within the scope of 2023 Education Vision in our country. In the present study, the purpose was to evaluate the transformation supported with digital contents and skills in the learning processes within the scope of 2023 Education Vision from the perspectives of teachers. In line with this purpose, tried to find answers to the research question of "What are the strong aspects, weaknesses, opportunities and suggestions regarding the transformation supported with digital contents and educational technologies within the scope of 2023 Education Vision from teachers' perspective?"

## **Method**

### **Research Model**

This study aimed to evaluate the strong aspects, weaknesses, opportunities and suggestions regarding the transformation supported with digital contents and skills in the learning processes within the scope of 2023 Education Vision from the perspectives of teachers. In the study, the case study method, which is based on the qualitative approach, was used. Qualitative studies allow revealing the

thoughts and feelings of individuals in a study group realistically and holistically in their natural environments (Yıldırım and Şimşek, 2013). Moreover, in qualitative studies, the research data collected via data collection tools like interviews are arranged and categorized to obtain themes, and eventually, this whole process is reported (Özdemir, 2010). In addition, the case study method, which is a qualitative research model, provides the researcher with the opportunity to collect in-depth information about a specific research topic and to examine the relationships between the data systematically (Cohen and Manion, 1998). In this study, the reason for using the case study method was that the teachers' views about the transformation supported with digital contents and skills within the scope of 2023 Education Vision would be evaluated. In this respect, in the present study, the case study method, one of qualitative research approaches, was used not only because teachers' views about the transformation supported with digital contents and skills one of subjects in the scope of 2023 Education Vision were taken into account as the specific case in the study.

### Study Group

While selecting the study group, the purposeful sampling method, which allows doing in-depth research within the context of variability and convenience, was used (Büyüköztürk, Çakmak Kılıç, Akgün, Karadeniz and Demirel, 2008). As the purpose of such studies as this one is not to generalize the results, special attention was paid to the holistic and in-depth examination of the data collected from the research sample. The number of the teachers to be interviewed was determined in a way to obtain the data that the researchers would need for the study (Lincoln and Guba, 1990). In this respect, the study was carried out with 27 teachers from different fields of teaching who participated in the workshop of “Instructional Technologies and Digital Content” together with four academicians expert in their fields within the scope of the congress of ““Our Educational Practices and 2023 Education Vision” at Van Yüzüncü Yıl University in 2019. The teachers took part in the study on voluntary basis, and as required by the research ethics, the participants were coded as T1, T2, ... T27. Table 1 shows information about the gender and teaching fields of the teachers.

**Table 1.** Information about the teachers participating in the study

Teacher Codes	Gender	Field of Teaching
T1	Male	Information Technologies
T2	Male	Information Technologies
T3	Male	Guidance and Counselling
T4	Female	Technology and Design
T5	Female	Turkish Language and Literature
T6	Female	Turkish Language Teaching
T7	Male	Turkish Language Teaching
T8	Male	Guidance and Counselling
T9	Male	Elementary School Mathematics Teaching
T10	Male	Mathematics Teaching
T11	Male	Science Teaching/Science and Technology
T12	Male	Information Technologies
T13	Female	Radio-Television

T14	Male	Guidance and Counselling
T15	Male	English Language Teaching
T16	Male	Elementary School Mathematics Teaching
T17	Male	Mathematics Teaching
T18	Female	Special Education
T19	Male	Information Technologies
T20	Male	Information Technologies
T21	Male	Turkish Language and Literature
T22	Female	English Language Teaching
T23	Female	Elementary School Teaching
T24	Male	Elementary School Teaching
T25	Female	Elementary School Mathematics Teaching
T26	Male	Information Technologies
T27	Male	Information Technologies

According to Table 1, of all the participants, eight of them were female teachers, and 19 were male teachers. In addition, it was seen that the teachers were from a wide variety of fields of teaching regardless of their gender (Information Technologies (f=7), Guidance and Counselling (f=3), technology and design (f=1), Turkish Language and Literature (f=2), Turkish Language Teaching (f=2), Elementary School Mathematics Teaching (f=3), Mathematics Teaching (f=2), Science and Technology (f=1), Radio-Television (f=1), English Language Teaching (f=2), Special Education (f=1) and Elementary School Teaching (f=2)).

#### **Data Collection and Analysis**

Within the scope of the study, the interview method was applied for the purpose of revealing the feelings, thoughts, beliefs and viewpoints of the participants regarding the research topic (Yıldırım and Şimşek, 2013). In addition, the semi-structured interview technique was used in the study as it allows explaining the questions in more detail and changing the order of the questions (Çepni, 2010). In order to find answers to the research question, the interview questions were prepared prior to the workshop by four academicians expert in their fields, who also organized that workshop. In order to ensure the content validity of the questions found in the semi-structured interview, three experts who had a doctorate degree in the field of mathematics and technology teaching and who had conducted qualitative studies before were asked for their views. In line with the experts' views, the necessary corrections were done in the interview questions, and two questions which were thought to be specific were excluded from the interview questions. The finalized questions in the semi-structured interview questions to be applied were used during the workshop. During the interviews held in the workshop process, the teachers participating in the study were directed questions not only about what the needs, problems and risks were in relation to the transformation supported with digital content and instructional technologies within the scope of 2023 Education Vision but also about their suggested solutions. Moreover, in line with the research problem, first, SWOT analysis was conducted to allow evaluating the transformation process in question and to produce ideas about the current weaknesses.

SWOT (Strengths, Weaknesses, Opportunities, Threats) is an analysis method which is used in the phase of evaluating the subject and making related decisions within the framework of the specified subject and which allows examining the strengths, weaknesses, opportunities and disadvantages of the subject together (Özan, Polat, Gündüzalp and Yaraş, 2015). In this respect, the participants were grouped in a way to let each of the four expert academicians work with about seven teachers. During the interviews, the questions focused on determining the strong and weak aspects of the transformation process and revealing the opportunities and disadvantages and on putting forward related suggestions.

For the analysis of the data collected via the interviews, first, the data were grouped within the scope of SWOT analysis and transcribed based on each group. Following this, the data were presented to all the participants with the help of a representative of each group, and the data which were agreed on were transferred as a text file into computer environment. In the second phase, the computerized qualitative data were examined using content analysis. For the analysis of data collected via interviews, the most appropriate technique is reported to be content analysis since it allows organizing the data in a way to help readers understand the data and make related interpretations from a more objective perspective within the framework of certain themes (Berg, 2001). Within the scope of the present study, for the purpose of ensuring the reliability of the data obtained via content analysis, the formula put forward by Miles and Huberman (1994) [Reliability = Agreement/ Agreement+ Disagreement] was used. In this respect, the reliability ratio between the researchers was calculated as 0.82. In addition, a fit percentage over 70% is reported to be enough for the coding reliability of researchers (Miles and Huberman, 1994). Therefore, the reliability and internal validity of the present study were ensured. Moreover, for the external validity of the study, teachers from different fields of teaching were selected for the study group to make generalization possible. Internal validity is defined as explaining the consequence of a causal relationship with the help of explicit reasons, while external validity refers to generalizing a consequence for a sample study group to real life (Karasar, 2014).

Lastly, in the third phase, all the views of the participants were categorized according to their contents and meanings within the SWOT analysis boundaries. The categorized data were made meaningful for the reader together with the teacher codes, frequencies and views. Within the scope of the reliability of the analysis, direct quotations were used regarding the data, which also helped reveal how the categorization was done. For the presentation of the data, the following criteria were taken into account: different views for quotations, appropriateness to the category and variety (Bümen, Ünver and Başbay, 2010).

### **Findings**

The results of the content analysis of the data within the boundaries of SWOT analysis revealed that the transformation supported with digital contents and skills in the learning processes within the scope of 2023 Education Vision could be evaluated under four main categories: “Strong

aspects of digital content and instructional technologies”, “weaknesses of digital content and instructional technologies”, “opportunities regarding digital content and instructional technologies” and “suggestions for the threats regarding digital content and instructional technologies”. Table 2 presents information about the teacher codes and frequencies regarding the categories.

**Table 2.** Categorization for the Evaluation of Digital Content and Instructional Technologies within the Scope of 2023 Education Vision

Categories	f*	Teacher Codes
Strong Aspects of Digital Content and Instructional Technologies	24	T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26
Weaknesses of Digital Content and Instructional Technologies	27	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27
Opportunities Regarding Digital Content and Instructional Technologies	17	T1, T3, T4, T7, T8, T11, T12, T14, T17, T19, T20, T21, T23, T24, T25, T26, T27
Suggestions for the Threats Regarding Digital Content and Instructional Technologies	26	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27

\*Some of the teachers participating in the study reported more than one view.

When Table 2 is examined, it is seen that regardless of their fields of teaching, most of the teachers (almost all of them) reported views about the strong aspects, weaknesses and development of the digital content and instructional technologies within the scope of 2023 education vision. In addition, more than half of the teachers (f=17) mentioned the opportunities regarding digital content and instructional technologies.

### **Teachers’ Views about the Strong Aspects of Digital Content and Instructional Technologies within the Scope of 2023 Education Vision**

In SWOT analysis, strong aspects are those which make the situation in question more effective and powerful when compared to other situations. Table 3 shows the categories, frequencies and teacher codes regarding the strong aspects of digital content and instructional technologies within the scope of 2023 Education Vision.

**Table 3.** Views about the Strong Aspects of Digital Content and Instructional Technologies within the scope of 2023 Education Vision

Strong Aspects	f*	Teacher Codes
Presence of EBA as a structure	24	T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26
EBA provides equal opportunity in education	19	T1, T3, T5, T6, T7, T9, T10, T11, T12, T13, T15, T17, T19, T20, T21, T23, T24, T25, T26
EBA includes a storage area for files, a system for producing contents, a wall for sharing and a wide variety of contents consistent with a wide variety of outcomes at all class grades including preschool period	18	T2, T3, T6, T7, T8, T9, T10, T11, T12, T14, T15, T17, T18, T20, T21, T22, T24, T25
EBA allows all teachers to upload contents	24	T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26

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Existence of the EBA TV platform used for personal and professional development	13	T1, T2, T7, T12, T13, T15, T17, T19, T21, T22, T23, T24, T26
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\*Some of the teachers participating in the study reported more than one view.

When the teachers' views about the strong aspects of digital content and instructional technologies within the scope of 2023 Education Vision were examined, it was seen that most of the teachers (f=24) considered the strong aspects to be the presence of EBA and uploading contents on EBA. This situation shows that the term 'digital content', which the teachers met within the scope of the study, reminded them of EBA. In addition, it was reported that besides providing equal opportunity in education, EBA had some other strong aspects such as a storage area for files, content production system, a wall for sharing and a wide variety of contents appropriate to a number of outcomes for all class grades. Moreover, the EBA TV platform, which was used for personal and professional development, was reported by the teachers (f=13) to be another strong aspect.

When the teachers' views were taken into account, it was seen that most of the teachers reported views about EBA in relation to the categories formed regarding the evaluation of the digital content and instructional technologies within the scope of 2023 Education Vision. This situation could be associated with the fact that one of the first and most important opportunities provided for teachers by the Ministry of National Education (MNE) in relation to digital content and instructional technologies was EBA. Some of the teachers' views about the strong aspects of digital content and instructional technologies were as follows:

*T17: I think in terms of supporting professional development and providing a wide variety of contents appropriate to all class grades, EBA provided by the MNE for us is the strongest aspect of digital content and instructional technologies.*

*T21: Besides EBA, as digital content and instructional technologies, the EBA TV platform was an important support, too.*

*T7: To me, the fact that it is possible for all teachers to access EBA and to upload a content is its one of strong aspects as it provides diversity.*

#### **Teachers' Views about the Weakness of Digital Content and Instructional Technologies within the Scope of 2023 Education Vision**

In SWOT analysis, In SWOT analysis, weak aspects of the situation in question are those which are weaker and which need to be developed when compared to other situations. In this respect, Table 4 shows the teacher codes, frequencies and categories related to the weaknesses revealed via the teachers' views about digital content and instructional technologies.



**Table 4.** Teachers' Views about the Weaknesses of Digital Content and Instructional Technologies within the Scope of 2023 Education Vision

Weaknesses	f*	Teacher Codes
EBA is inefficient for all subject areas in terms of content	27	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27
There is a perception that the contents in EBA are pedagogically inefficient. Therefore, teachers tend to prefer special content providers	18	T2, T3, T4, T5, T6, T8, T10, T11, T13, T14, T15, T16, T17, T18, T21, T22, T23, T24
It is not possible to access all the videos in EBA offline	20	T1, T3, T5, T6, T7, T8, T9, T10, T11, T12, T15, T16, T17, T19, T21, T22, T23, T24, T25, T27
EBA is not advertised sufficiently	27	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27
It is important to involve users in the development of contents. However, there is no related incentive.	13	T1, T2, T4, T8, T12, T14, T17, T19, T20, T23, T25, T26, T27
One has to pay for the software to be used for the development of e-contents.	18	T3, T5, T6, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T21, T22, T23, T24, T25
The curricula are too frequently changed.	12	T2, T9, T10, T11, T14, T16, T17, T19, T21, T25, T26, T27
In the process of digital content development, the software most appropriate to content is not definite.	15	T3, T5, T6, T7, T8, T10, T11, T14, T15, T16, T18, T21, T22, T23, T24
The courses that teachers take in their preservice training (teacher-training institutions) are inconsistent with in-service practices.	24	T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T12, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T27
There are several difficulties experienced in relation to the technologies used to access e-contents (interactive whiteboards, tablets and so on), and there is no technical support for these difficulties.	21	T3, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T21, T22, T23, T24, T25
E-contents and equipment for individuals who are in need for special education are inefficient.	10	T3, T5, T8, T14, T16, T18, T21, T22, T23, T24

\*Some of the teachers participating in the study reported more than one view.

As can be seen in Table 4 showing the teachers' views about the weaknesses of digital content and instructional technologies within the scope of 2023 Education Vision were examined, all the teachers (f=27) agreed on the fact that EBA was not advertised sufficiently and that it was not efficient for all the subject areas in terms of content. In addition, as other important weaknesses, it was reported that the preservice trainings for the teachers were not consistent with the on-the-job practices (f=24); that several technical difficulties were experienced in relation to the technologies used to access e-contents (f=21) and that it was not possible to access all the videos in EBA offline (f=20). Moreover, it was also seen that the teachers had a tendency to apply to special content providers due to the perception of pedagogical inefficiency of contents in EBA (f=18); that the software to be used in the process of the development of e-contents was not free of charge (f=18); and that the software most appropriate to the contents in the process of digital content development was indefinite (f=15); however, it was a striking fact that most of the teachers reporting these views were from fields of teaching quite irrelevant to Information Technologies and technological skills. Furthermore, in relation to the weaknesses, some other teacher reported that development of e-contents was not sufficiently encouraged or supported (f=13) and that there were frequent changes in the curricula (f=12). Besides all these views, there were still other teachers (f=10), especially those from the fields of Special

Education and Guidance/Counselling, who thought that the e-contents and equipment for individuals who needed special education were inefficient.

Considering the teachers' views, it was seen that there were not only teachers who reported common views about the categories related to the weaknesses of digital content and instructional technologies within the scope of 2023 Education Vision but also other teachers from different fields mentioned other different weaknesses. This difference is thought to result from the fact that teachers from different fields of teaching have different needs. Some of the teachers' views about the weaknesses of digital content and instructional technologies were as follows:

*T8: I think the contents in EBA are not pedagogically efficient. Also, we don't know which software to use for which content. Thus, we try to create contents with the help of special content providers. Additionally, the fact that the software used to develop e-contents is not free of charge discourages us from producing digital contents. On the other hand, if we were encouraged for that, I think we would get more interested.*

*T15: The contents in EBA do not cover all the subjects. We don't have offline access to certain contents, especially to the videos.*

*T11: The preservice training that teachers receive is unfortunately not parallel to the teaching process. We cannot adapt ourselves to the teaching process. In addition, the curriculum is constantly renewed. Moreover, we need support to overcome the technical difficulties we experience while using digital contents.*

*T18: As a Special Education teacher, I think the most important weakness of digital contents and instructional technologies is the lack of equipment and e-contents for individuals who need special education.*

### **Teachers' Views about the Opportunities Regarding Digital Content and Instructional Technologies within the Scope of 2023 Education Vision**

In SWOT analysis, opportunities are those provided to improve the conditions in the situation in question by increasing the influence of the factors that will make the situation in question better than other situations and by decreasing the related weaknesses. In this respect, Table 5 presents the teacher codes, frequencies and categories regarding the opportunities revealed via the teachers' views about digital content and instructional technologies.

**Table 5.** Teachers' Views about the Opportunities Regarding Digital Content and Instructional Technologies within the Scope of 2023 Education Vision

Opportunities	f*	Teacher Codes
GSM operators provide 3GB for free access to EBA	14	T1, T4, T7, T8, T12, T13, T17, T19, T20, T21, T23, T24, T25, T27
Academics and university students are allowed to access EBA	17	T1, T3, T4, T7, T8, T11, T12, T14, T17, T19, T20, T21, T23, T24, T25, T26, T27
Education Faculty students and academics can use the EBA platform with the help of their e-state usernames and passwords	9	T1, T3, T8, T12, T19, T24, T25, T26, T27
Such educational networks as Morpa Campus, which includes e-contents appropriate to the MNE curricula are supported	11	T1, T4, T7, T11, T12, T17, T20, T21, T23, T24, T25

\*Some of the teachers participating in the study reported more than one view.

As can be seen in Table 5 showing the teachers' views about the opportunities regarding digital content and instructional technologies within the scope of 2023 Education Vision, most of the teachers (f=17) believed that the providing academics and university students with the opportunity to access EBA was an important opportunity for academics and university students to make use of EBA. In addition, some of the teachers (f=9) reported that allowing education faculty students and academics to access the EBA platform using their e-state usernames and passwords was another important opportunity in terms of reaching the course contents as well as publishing the contents on EBA which they prepared with the help of content production tools. Moreover, 3GB provided by GSM operators for access to EBA was reported by some other teachers (f=14) to be an important opportunity for effective use of EBA. Besides all, there were other teachers (f=11) who believed that another opportunity was the existence of information sharing platforms such as MORPA Campus, which includes e-contents appropriate to the MNE curricula.

When the teachers' views about digital content and instructional technologies within the scope of 2023 Education Vision were taken into account, it was seen that generally, the Science, Mathematics, Information Technologies and Elementary School Teachers reported views about the opportunities provided. Interestingly, the teachers especially from the fields of English Language Teaching, Radio-Television and Special Education were not knowledgeable about the opportunities provided. This situation could be due to the fact that EBA was not considered to be efficient in terms of contents related to these fields of teaching. Some of the teachers' views about the opportunities regarding digital content and instructional technologies were as follows:

*T19: It was an opportunity for university students and academics to access and make use of EBA. Also, thanks to its newly-added feature, education faculty students and academics can now use EBA with the help of their e-state usernames and passwords. In this way, they will be able to enter the system and develop related contents.*

*T4: For example, some of the GSM operators do not charge for accessing EBA if you don't exceed 3GBs. This makes access to EBA more appealing.*

*T11: Sometimes, I use the contents in Morpa Campus. They are appropriate to the MNE curriculum, and they are supported by MNE. I think this is a nice opportunity, and such opportunities should be increased and varied.*

### **Teachers' Suggestions for the Threats Regarding Digital Content and Instructional Technologies within the Scope of 2023 Education Vision**

In SWOT analysis, threats are factors that directly or indirectly have negative influence on the situation in question, and suggestions put forward to minimize these factors are of great importance. In this respect, Table 6 presents the teacher codes, frequencies and suggestions regarding the threats revealed via the teachers' views about digital content and instructional technologies.

**Table 6.** Teachers' Suggestions for the Threats Regarding Digital Content and Instructional Technologies within the Scope of 2023 Education Vision

Suggestions Regarding the Threats	f*	Teacher Codes
The measurement and assessment systems could be developed in accordance with the new system for a successful preparation and implementation of digital contents	24	T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27
A system could be designed in a way to encourage content developers (by paying them, rewarding them and so on) in the process of the preparation of digital contents	18	T1, T2, T4, T6, T8, T10, T11, T13, T14, T15, T16, T17, T18, T21, T23, T24, T26, T27
Material developers could be given trainings and informed about material development in the process of preparation of e-contents	26	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27
Mass-media tools could be used to introduce digital materials that teachers and students will use	23	T2, T3, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26
Teachers and students could be encouraged to use interactive e-contents	26	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27
Necessary precautions could be taken to minimize the probable negative effects of violence-included games and other similar materials on the target population	18	T2, T3, T5, T6, T7, T8, T9, T11, T13, T14, T16, T18, T19, T21, T23, T24, T25, T27
Workplaces for design and skill development could be enriched and spread in a way to make them accessible to all students, and sizes of class populations could be made appropriate to these workplaces	21	T1, T2, T3, T4, T7, T8, T9, T10, T11, T13, T14, T16, T17, T18, T19, T20, T23, T24, T25, T26, T27
A graded scoring system could be developed for users to evaluate the digital contents in EBA	26	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27

\*Some of the teachers participating in the study reported more than one view.

According to Table 6, which shows the teachers' suggestions for the threats regarding digital content and instructional technologies within the scope of 2023 Education Vision, the teachers (f=26) reported that e-content developers could be given the necessary related trainings; that it should be possible to evaluate the contents in EBA; that interactive use of e-contents should be encouraged; and

that any failure to take the necessary actions in line with these suggestions might result in threats. In addition, the fact that the digital content was not parallel to the current measurement and evaluation system (f=24) and that there was no efficient introduction of digital materials (f=23) were considered to be other threats, and it was seen that the teachers provided suggestions regarding these factors. Moreover, according to the teachers from the fields of Information Technologies, Mathematics Teaching, Science Teaching, Elementary School Teaching, Guidance/Counselling and Special Education (f=21), use of design and skill development workplaces as a place where specific activities are carried out rather than as an environment which all students can use was a threat, and it was seen that the teachers put forward suggestions regarding this factor. Especially the teachers from the fields of Guidance/Counselling, Elementary School Teaching and Radio-Television (f=18) mentioned the probable effects of violence-included games and other similar systems/materials on the target population and put forward related suggestions to minimize these effects. Besides all the views, some of the teachers (f=18) pointed out that lack of encouragement of digital content developers could threaten the process of digital content development as well.

When the teachers' views were taken into account in general, it was seen that they reported common views about certain threats. The teachers concerned with technology focused more on the deficiencies related to increasing the effectiveness and productivity of the e-content development process, while the teachers from the fields of Guidance/Counselling, Special Education and Radio-Television mentioned sociological and psychological deficiencies more. This situation could be associated with the fact that the threats mentioned by the teachers varied depending on the teachers' interests and on their fields of teaching. Some of the teachers' suggestions for the threats regarding digital content and instructional technologies were as follows:

*T2: Unless e-content developers are informed about material development and given related trainings, the contents to be developed will not be as desired. In fact, it should be possible for users to evaluate the contents formed; for example, a graded scoring method could be used. Also, teachers and students should be encouraged to use these contents; otherwise, the contents prepared will not be useful.*

*T25: One of the most important threats is that the digital contents are not parallel to the measurement and evaluation system in our education system. I mean in order for the contents within the scope of the education vision to be applicable, the measurement and evaluation system should be developed as parallel to the new structure.*

*T18: There are design-skill workplaces at schools, but generally, upper-grade students carry out applications in these workplaces. Also, these applications do not appeal to all the fields. To me, these workplaces should be designed as environments in which all children can develop projects in line with their own interests and increase their learning.*

*T14: Obviously, some violence-included games, systems, activities or materials have negative effects on students and users. The necessary precautions should be taken to minimize the negative effects of such contents.*

### **Discussion, Conclusion and Suggestions**

Within the scope of the 2023 Education Vision report published by the Ministry of National Education (MNE), the purpose is to prepare contents for the development of teachers' digital skills and to organize teacher-trainings accordingly (MNE, 2018). In this respect, in the present study conducted to evaluate the transformation supported with digital content and instructional technologies within the scope of 2023 Education Vision from the perspectives of teachers, who have an active role in the process, it was found that in general, digital content and instructional technologies involve not only opportunities but threats as well. In line with this result, within the framework of SWOT analysis, it was revealed that the transformation supported with digital content and instructional technologies could be evaluated under four main categories. These categories were strong aspects of digital content and instructional technologies, weaknesses, opportunities and suggestions regarding the threats. When the teachers' views about the evaluation of digital content and instructional technologies within the scope of 2023 Education Vision were examined in general, it was seen that regardless of their fields of teaching, most of the teachers reported views about EBA in relation to all the categories. Based on this situation, it could be concluded that the EBA project is one of the most important opportunities provided for teachers within the context of the current education system in Turkey. Similarly, several studies revealed that the EBA project put into practice within the scope of the FATİH Project (Movement of Enhancing Opportunities and Improving Technology) is a fairly important project to increase effective use of materials via Information Technologies in the education process (Banoğlu, Madenoğlu, Uysal and Dede, 2014; Çiftçi, Taşkaya and Alemdar, 2013; Erensayın and Güler, 2017; Ertem-Akbaş, 2019; Eryılmaz and Uluyol, 2015; Kurtdede Fidan, Erbasan and Kolsuz, 2016).

In the study, regardless of their fields of teaching, the teachers' views demonstrated that the equal opportunity in education provided by digital content and instructional technologies within the scope of 2023 Education Vision is one of the strong aspects. This result is consistent with the findings obtained in two other studies carried out by Akgün, Yılmaz and Seferoğlu (2011) and Baz (2016), who reported that the developing sub-structure of information and communication allows being in a close relationship with the international information community within the scope of the 2023 vision strategy document and FATİH Project. In addition, based on the teachers' views, it was revealed that besides providing equal opportunity in education, there were other strong aspects of EBA such as contents consistent with a number of outcomes for all class grades, a storage area for files, a content development system and a wall for sharing. Accordingly, considering the fact that learning experiences could be shaped in platforms for sharing in line with the use of digital media and materials in the learning process thanks to the development of technology, it could be stated that the

opportunities provided via EBA could contribute to the digitalization of our education system. In relation to this, Erensayın and Güler (2017) put emphasis on the importance of the quality and scope of course materials to be developed via EBA and suggested the development of such materials.

In the study, regarding the weaknesses of digital content and instructional technologies, the teachers agreed that EBA was not advertised sufficiently and that it was not efficient enough to cover all the subject areas in terms of content, and it was seen that some of the teachers, especially those from the fields of Special Education and Guidance/Counselling, mentioned lack of equipment and e-contents for individuals who need special education. Depending on these views, it could be stated that some of the weaknesses related to educational technologies and digital content were associated with the variety of fields of teaching. This result is parallel to the finding obtained by Çiftçi, Taşkaya and Alemdar (2013) and by Özkan and Deniz (2014), who reported that the teachers from different fields of teaching who evaluated the FATİH Project had different needs. In addition, based on the teachers' views, it was concluded that technical equipment problems were experienced in relation to educational technologies and that the contents in EBA were inefficient in terms of quality, variety and pedagogical issues. Similarly, several studies carried out with teachers (Ateş, Çerçi and Derman, 2015; Kurtdele Fidan, Erbasan and Kolsuz, 2016; Yıldız and Sarıtepeci, 2013; Yüksel and Adıgüzel, 2012) demonstrated that teachers failed to develop course contents in EBA; that they were unable to download the course materials via EBA and do changes in them; and that they could not share videos or the activities they had prepared via EBA. Moreover, Baz (2016) points to the deficiencies in contents and technical equipment in educational technologies. Undoubtedly, it is primarily important to solve the problems related to technical equipment and e-content and to do the necessary arrangements so that the goals for digital content and instructional technologies within the scope of 2023 Education Vision can be achieved. In this respect, e-contents could be developed by giving specific in-service trainings as well as by encouraging and supporting expert content providers from various fields. In addition, teachers who fail to produce contents though they prefer to use the contents in EBA could be encouraged to produce contents by working with expert content providers.

The findings obtained via the teachers' views about the opportunities regarding digital content and instructional technologies within the scope of 2023 Education Vision revealed that allowing academicians and university students to access EBA and allowing education faculty students and academicians to enter the EBA platform using their e-state user names and passwords were among important opportunities. In relation to this, it was seen that university students were provided with the opportunity to make use of EBA and that academicians expert in their fields were provided with the opportunity to prepare and publish the educational contexts via EBA by using the content production tools on EBA. According to Baz (2016), attempts to develop e-contents could be made in cooperation with education faculties of universities. Moreover, the teachers' views demonstrated that the 3GB-free access to EBA provided by GSM operators and the platforms like MORPA Campus for information

sharing were among other opportunities provided. Considering the fact that access to information sharing platforms is important for the application of strategies related to instructional technologies as well as for raising social awareness, it is thought that the diversity of these platforms and the incentives for effective use of such platforms are of great importance. Similarly, it is seen in related literature (Ateş, Çerçi and Derman, 2015; Erensayın and Güler, 2017; Kurtdede Fidan, Erbasan and Kolsuz, 2016) that researchers point to the importance of the use and variety of information sharing platforms and suggest promoting and awarding the effective use of these platforms. In this respect, the effectiveness of digital content, information sharing platforms and instructional technologies to be applied in line with 2023 Education Vision could be explained based on the importance of the opportunities to be provided for users by considering their lives, careers and learning skills.

When the teachers' suggestions for the threats regarding digital content and instructional technologies were taken into account, it was seen that most of the teachers agreed on certain threats; however, the teachers from technology-related fields focused more on the deficiencies related to effectiveness and productivity of the e-content development process, and the teachers from the fields of Guidance/Counselling, Special Education and Radio-Television put more emphasis on sociological and psychological weaknesses. In this respect, based on the technology-related views of the teachers, it was concluded that it is important to use design-skill workplaces in a way to create learning environments in which students can learn by doing and living and in a way to combine the related theories and practices. This result is also consistent with the goals of the "transformation process supported with digital content and skills in learning processes" declared by MNE within the scope of the 2023 Education Vision document (MNE, 2018). The views of the teachers from the fields of Guidance/Counselling, Special Education and Radio-Television revealed that it is important to prepare contents by considering the probable bad effects of violence-included games and other similar systems on the target population. This result is parallel to the finding obtained by Bükür and Uludağ (2010), who reported that violence-included games lead individuals to violence and crime. In addition, the teachers' views demonstrated that the digital content is not consistent with the measurement and evaluation system used in the education system in Turkey. Considering the fact that students in Turkey study in line with the measurement and evaluation system applied within the scope of the education system in the country, it could be stated that the instructional technologies to be used by teachers in the teaching process will not be sufficiently influential on students' levels of success and interests. In relation to this, Orhan, Kurt, Ozan, Vural and Türkan (2014) pointed out that measurement and evaluation systems should be developed in line with instructional technologies to make effective and productive use of these technologies. In this respect, in the present study, the teachers' suggestions for the probable threats regarding digital content and instructional technologies could be associated with future digitalized efficacies and innovative skills related to their fields of teaching.



The findings obtained via the teachers' views within the scope of this study point to the importance of an education system which will help meet the future needs and which will keep up with the developing technology. In this respect, learners and teachers should adapt their roles to the digital transformation in education, and all the elements supporting this digital transformation in the teaching process should be used together. Considering the fact that the future and future professions will be shaped in a digitalized world, it is obvious that our education system will inevitably digitalized. Therefore, the "2023 Education Vision Document" has great importance since it is considered to be a guide in the process of transition to information society. Furthermore, strategies to be applied in the process of this transformation supported with digital content and skills in the learning processes within the scope of 2023 Education Vision are of great importance as well. Depending on the views of the teachers participating in the present study, it could be stated that raising all individuals' social awareness and increasing their sense of belonging who are responsible for the application of educational, scientific and technological strategies (content developers, teachers, learners and so on) are fairly important to be successful and to get the intended results. Moreover, in terms of making the most of current opportunities, it is also important to consider the critics and suggestions put forward regarding probable threats so that the goals of digital content and instructional technologies within the scope of 2023 Education Vision can be achieved. In addition, in the light of the overall picture suggested by the results of the SWOT analysis in the present study regarding digital content and instructional technologies within the scope of 2023 Education Vision, the necessary attempts to be made should constantly be investigated and updated in line with the related literature. Additionally, in order to accomplish the goals determined in the 2023 Education Vision Document and to maintain consistency and success in the functioning of the education system, it is important and essential to do the necessary arrangements and changes in a timely manner by revising the current education system.

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