AN EVALUATION OF TEACHERS' VIEWS ON OPEN EDUCATIONAL RESOURCES

Dr. Nilgun TOSUN
ORCID: 0000-0002-3470-858X
Education Faculty
Trakya University
Edirne, TURKIYE

Soner ALTINTAS
ORCID: 0000-0002-3875-599X
Luleburgaz Vocational School
Kirklareli University
Kirklareli, TURKIYE

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ABSTRACT

The objective of this study is to determine the ways in-service teachers in Turkiye make use of open educational resources and their opinions on using them. For this purpose, the explanatory sequential design has been employed. 588 teachers have participated in the quantitative part of the study; and ten have participated in the qualitative part on a voluntary basis. Data collection instruments have been (a) a personal information form developed by the researchers comprised of 16 questions and (b) a semi-structured interview form with 3 questions. The personal information form has been administered online to participants via social media. Whereas the interviews have been conducted using Zoom teleconferencing software. According to the findings, more than half of the teachers are knowledgeable on the matter of open educational resources and information resources consist of social media. It has been determined that female teachers make greater use of open educational resources than males. It has been established that the most significant affordance of open educational resources is the way it saves time and space for teachers, whereas lack of time and knowledge are the primary obstacles against using open educational resources. Additionally, the opinions of teachers show a demand from their employing organizations towards activities for raising awareness towards the matter of open educational resources and it has been shown that they wish to be encouraged on this matter. It has also been expressed that they expect quantitative and qualitative improvement of the resources provided by the Ministry of National Education, as well as support and cooperation on the use of open educational resources.

Keywords: Open educational resources, personal development, vocational development, teacher, OER.

INTRODUCTION

Notions involving education and teaching are among basic notions that have remained at the center of life since the existence of humanity. In contrary to past centuries, most of the educational activities in the 21st century is conducted in schools. The activities that take place in schools are based on a number of systems. Teachers assume valuable tasks regarding procuring the information and skills that are needed in addition to the responsibilities that are brought along by the said systems. The most significant of these tasks is to raise individuals, who will contribute to the society by way of ensuring that they attain necessary information (Ozdemir & Orhan, 2019). In addition to the skills that teachers acquire for themselves and their occupations, the society has some expectations from the teachers as well (MEB, 2017). Among these expectations remain the teachers' keeping track of their self-development on a continuous basis; additionally, the constant improvement of the quality of educational activities that they provide. It is considered that if the

teachers could respond to the said expectations, circumstances involving the development of the society in all fields will occur and education will flourish (Shohel, 2012). Furthermore, it is also expected that teachers keep up with the changing world as a requirement of the age they are living in. Consequently, the notions of personal development and vocational development that must be significant for all individuals today becomes a more critical condition for those who conduct the occupation of teaching. Similar opinions are explicitly specified in a policy paper that was published by The Turkish Ministry of Education (MEB) (MEB, 2017). As such, it seems that the most significant stakeholder of education that can improve the quality of education and ensure the development of society are the teachers.

Therefore, it can be claimed that the profession of teaching requires lifelong learning. Teachers must improve themselves continuously. With the purpose of facilitating the personal and vocational developments of teachers, some training programs have been launched by MEB. Nevertheless, MEB (2017) emphasizes that these educational activities may remain inadequate by themselves and that effort from teachers towards keeping track of their self-development using various methods is also necessary to move forward. At this point, the notion of Open Educational Resources (OER) becomes pronounced.

Educational materials that emerged alongside rapidly developing information technology for the purpose of overcoming conventional obstacles present in educational activities and contain traces of the notion of openness at the core are expressed as OER (OECD, 2007). MEB (2017) states that teachers may be kept away from in-service training and development activities due to various reasons (heavy workloads, financial reasons, health problems, perceived lack of quality in training activities etc.) and yet these now carry the opportunity to proceed with personal and vocational development by the way of open educational resources. Furthermore, since such materials may be reached over the Internet, access to information takes place in a much easier and quicker manner.

OBJECTIVE OF THE RESEARCH

During the COVID-19 outbreak across the world, educational activities in many countries have been conducted through a method named emergency distance education. The sudden change has caused all education stakeholders and primarily the teachers to keep track and make use of digital course materials. During this process, it is considered that the ratio of use of OER is increasing, and that this ratio will continue to increase soon. The objective of the present research is to examine the routine use of OER by in-service Turkish teachers with the purpose of furthering their personal and vocational developments and to establish their opinions on the use of these. In this context, the research questions below have been formulated:

1. Are the teachers knowledgeable on the notion of open educational resource?
2. Which information sources do teachers use for learning about and staying relevant with open educational resources?
3. Which open educational resources are in use by the teachers with the intent of personal and vocational development?
4. What are the possible obstacles against the use of the open educational resources with the purpose of personal and vocational development?
5. On what platforms do teachers share the digital course materials they create with the intent of these being used as open educational resources?
6. Do the condition of usage of the open educational resources by teachers with the purpose of their personal and vocational development depend upon teachers'
    a. Gender,
    b. Age,
    c. Years in profession,
    d. Educational background,
    e. Branch,
    f. Level of school in which they work,

g. Task at school in which they work,
h. Type of school in which they work,
i. Location in which they work.

7. What benefits do open educational resources provide for the personal and vocational development?
8. What are the expectations of the teachers from their employing organizations to execute with their personal and vocational developments using open educational resources?
9. What are expectations of the teachers from MEB for them to execute with their personal and vocational developments using open educational resources?

This research limited to

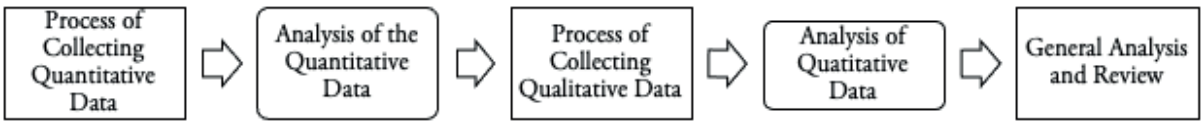
- 2021-2022 academic year,
- teachers from all branches working in public and private schools affiliated to the MEB,
- collection instruments prepared by researchers.

METHOD

Research Model

The present research follows a mixed research method, which involves both quantitative and qualitative research patterns (Creswell, 2012). Mixed research has been chosen as a method with the goal of obtaining profound information relating to the study and to offer solutions to the expressed research problem in a more detailed manner. In this context, this study follows the sequential design, which is one of the mixed research methods. In explanatory sequential design, the study is supported by a qualitative part to be able to explain the quantitative data collected by the researcher as well as the findings that have been obtained from the said data (Fraenkel et al., 2012). Details on explanatory sequential design has been given in Figure 1.

Figure 1. Explanatory sequential design (Fraenkel et al., 2012)



As part of the quantitative part of the research, descriptive survey model has been used. According to Buyukozturk et al. (2020), descriptive survey model investigates the peculiarities involving interests or skills on any matter belonging to the participants. Whereas, according to Karasar (2020), it is a model, which investigates any phenomenon that occurred in the past or continues to occur in the present.

As part of the qualitative part of the research, case study pattern has been used. In case studies, one or more than one situation or phenomenon is made a matter of extensive research (Yildirim & Simsek, 2016).

Participants

Teachers from various specialty fields, who were employees at either public or private K12 schools in Turkiye operating under authority of MEB during the academic year of 2021 – 2022 have been participants in this research. Through convenience sampling, 588 teachers have been designated as participants. The demographic data of teachers that participate in the research have been presented in Table 1.

Table 1. Demographic data of participants

Variable	Group	N	%
Gender	Female	367	62,4
	Male	221	37,6
Age	22-30	234	39,8
	31-40	246	41,8
	41 and above	108	18,4
Year of Seniority	0-5 years	230	39,1
	6-10 years	141	24
	11-15 years	92	15,6
	16 and above	125	21,3
Specialty Field	Information Technologies	208	35,4
	Others	380	64,6
Level of School	Kindergarten	23	3,9
	Primary School	84	14,3
	Secondary School	269	45,7
	High School	212	36,1
Task at School	Director/Assistant Director	51	8,7
	Teacher	537	91,3
Type of School	Public	482	82
	Private	106	18
Location of School	City center	192	32,7
	County	327	55,6
	Village	69	11,7
		588	%100

Qualitative data have been collected from ten teachers that work in various branches in either public or private schools under MEB in the school year of 2021 – 2022. Purposive sampling has been used for determining participants at the qualitative stage. The information on participants of the qualitative stage has been presented in Table 2.

Table 2. Information relating to the teachers that participated in the interview

Code	Gender	Age	Year of Seniority	Educational Background	Specialty Field	School Level	Task	Type of School	School Location
O1	Woman	29	0-5 years	Master's Degree	Social Studies Teacher	Secondary School	Teacher	Private	City Center
O2	Man	32	6-10 years	Bachelor's Degree	Information Technologies Teacher	Secondary School	Teacher	Public	City Center
O3	Woman	24	0-5 years	Bachelor's Degree	English Teacher	Secondary School	Teacher	Private	County
O4	Woman	31	0-5 years	Master's Degree	Information Technologies Teacher	Secondary School	Teacher	Public	City Center
O5	Woman	25	0-5 years	Master's Degree	German Teacher	High School	Teacher	Private	County
O6	Man	33	6-10 years	Bachelor's Degree	Information Technologies Teacher	Secondary School	Teacher	Private	City Center

O7	Woman	32	0-5 years	Bachelor's Degree	English Teacher	Secondary School	Teacher	Private	County
O8	Woman	31	6-10 years	Bachelor's Degree	Information Technologies Teacher	Secondary School	Teacher	Private	County
O9	Woman	27	6-10 years	Bachelor's Degree	Turkish Language and Literature Teacher	High School	Teacher	Public	County
O10	Woman	31	0-5 years	Bachelor's Degree	History Teacher	High School	Teacher	Public	County

Data Collection Instruments

Data were collected via a Personal Information Form and the semi-structured interview form both of which have been prepared by the researchers.

Personal Information Form

The Personal Information Form has been used for determining participants' demographic information and their ways of using OER. A literature review was conducted prior to creating the form and twenty-six questions, which were split into two parts, have been formulated accordingly. Expert opinions have been sought to establish scope validity once the form has been created. Experts were chosen from three scholars from the college departments of Computer Education and Instructional Technologies and 3 Information Technologies in-service teachers. Based on expert opinions, questions that were found to be out of scope have been removed. Linguistic validity of the form has also been sought by consulting the opinions of three in-service Turkish language teachers. A pilot implementation of the form has then been initiated with 21 teachers and no negative feedback has been received as a result. The form has thus been finalized.

Personal Information Form consists of two parts. The first part of the form comprises ten questions involving demographic information of participants, with eight questions being multiple choice; and 2 open-ended. These questions sought to reveal data such as gender, ages, years of employment, educational background, specialty fields, level of school in which they worked, tasks at schools in which they work, types of schools in which they work, and the location of the school. The second part of the form involved specifics on OER usage of participant. Here, six questions were concerning the state of awareness towards OER, ways of using OER and purposes of using OER. Whereas five questions have been multiple-choice in this part, 1 question has been open-ended. This part has sought to understand whether teachers were knowledgeable of the OER repositories available to them in Turkiye and how they had acquired the said information. It was also asked to participants the purposes for which they had made use of OER repositories (if ever) in the past, the possible obstacles they confronted while using OER (if any), whether they had published any course materials of their own design on any OER repository and; if they did, what the platforms were.

Semi-Structured Interview Form

For the qualitative part of the study, a semi-structured interview form prepared by the researchers has been used. Interviewing is a method useful for obtaining information relating to the experiences, the considerations, critiques, or feelings of individuals (Yildirim & Simsek, 2016). At the initial stage, 8 interview questions of have been formulated. These were shared with the same experts that also examined the Personal Information Form. As per the feedback received from experts, number of questions on the interview form have been reduced to three. Through this form, it was aimed to find out the opinions of participants on the potential benefits OER provided for their personal and vocational developments and their expectations from MEB or employing institutions in the context of beneficial OER use.

Before conducting the surveys and interviews, approval was obtained from Trakya University Social and Human Sciences Research Ethics Committee for both data collection instruments.

Collection and Analysis of Data

Collection of Data

To be able to collect data as part of the quantitative part of the research; primarily, the questions that take place in the Personal Information Form have been transferred to the digital environment using Google Forms application. After this, the form was shared with participants using social media platforms Facebook, Twitter, and Instagram. Furthermore, the form URL has been shared with online interest groups consisting of teachers.

For the collection of qualitative data, teachers that are knowledgeable about OER have been determined in the first place and requests of interview have been sent to these. Due to intense workload of teachers and COVID-19 measures in place, the decision was made to conduct interviews using Zoom teleconferencing software.

Before the administration of the data collection tools, necessary permission was obtained from the Kirklareli Provincial Directorate of National Education.

Analysis of Data

For the quantitative part of the study, data have been analyzed using SPSS 26.0 software package. In addition to descriptive statistics, chi square tests have been used for analyzing quantitative data therein.

As for qualitative data, the method of content analysis has been used. The main objective of content analysis is to gather up the similar data in the framework of the common themes and to present the said themes in a way that the readers (Yildirim & Simsek, 2016) can comprehend them. At the phase of the content analysis, the replies that were given by the two specialists, one of whom is the researcher himself and the other the field specialist relating to the topic, have been examined and coded. The replies that were given by 10 teachers in response to three separate questions have been coded one by one and then the codes belonging to the specialists have been compared and the themes on which a consensus was reached have been compared. In the case of the coding made one by one, the harmony between the two coding has been calculated using the formula that had been suggested by Miles and Huberman (2019) (Number of consensus/Total consensus+ difference of opinion); the coefficient of concordance between the coders has been found out to be 90%. Then, the two experts have studied together upon the coding and the conclusion has been derived that the two experts agree with one another. Upon the preparation of the final themes, a consensus has risen to 100%.

FINDINGS

Whether 588 teachers that made a participation in the research are knowledgeable or not on the notion of OER has been investigated. Table 3 shows relevant findings.

Table 3. The frequency values relating to the situation as to whether the teachers are knowledgeable or not on the notion of OER

Are you knowledgeable on the notion of OER?	f	%
Yes	402	68,4
No	186	31,6
Total	*588*	*100,0*

The question of how the teachers came to possession of the related information if they are knowledgeable of the notion of OER has been asked and it was requested to pick from a list of options. The findings have been presented in Table 4. As this question has allowed teachers to select more than one option, the total frequency values do not present the total number of participants.

Table 4. The frequency values relating to the sources of information of teachers who are knowledgeable on the notion of OER

Information source relating to the notion of OER	f	%
Social media posts	302	75,1
Courses received during college education	168	41,8
Colleagues	212	52,7
Supervisors	37	0,9
Students	28	0,7
School parents	7	0,1
Web sites or blogs dedicated to the topic	153	38
Participated In-service trainings sessions	139	34,6
Participated Academic seminars/conferences	127	31,6
Books/journals	83	20,6
Activities of non-governmental organizations	54	13,4

The question as to whether the teachers made use of OER for the purpose of their personal and vocational developments has been put forward. The outcome has shown that 508 teachers made use of OER, whereas eighty of them did not. Subsequently, the teachers that have given responded that they made use of OER have been provided with fifteen various OER repositories and have been asked about the types of resources they made use of together with the intent of using those. Findings have been presented in the Table 5. Again, the teachers may have made more than one response to the given question and the total frequency values therefore do not indicate the total number of participants.

Table 5. The frequency values belonging to OER that the teachers made use of for the purpose of their personal and vocational developments

OER	For the purpose of Vocational Development		For the Purpose of Personal Development		For the Purpose of both Vocational and Personal Development	
	f	%	f	%	f	%
MIT OCW	11	1,9	10	1,7	2	0,3
Connexions (OpenStax CNX)	5	0,9	2	0,3	3	0,5
MERLOT	5	0,9	6	1	3	0,5
OpenLearn	20	3,4	23	3,9	14	2,4
OER Commons	4	0,7	4	0,7	2	0,3
Khan Academy	84	14,3	48	8,2	76	12,9
YOK Course Platform	41	7,0	23	3,9	26	4,4
Educational Information Network (EBA)	259	44,0	20	3,4	205	34,9
Ankara University's Open Course Materials (ANKADEM)	28	4,8	20	3,4	11	1,9
Hacettepe University's Open Course Materials (HUADEM)	16	2,7	12	2,0	8	1,4
Middle East Technical University's Open Course Materials (METU ADM)	27	4,6	12	2,0	17	2,9
Bilgeis	28	4,8	15	2,6	24	4,1
Cizgi Tagem	55	9,4	17	2,9	32	5,4
BTK Akademi	65	11,1	26	4,4	67	11,4
Distance Education Gate	116	19,7	23	3,9	73	12,4

The type of obstacles that stand against their usage of OER for the purpose of their personal and vocational development has been asked and 503 teachers have responded the question. Findings have been presented in Table 6. The question allowed the choice of multiple answers, and the total frequency value therefore does not indicate the number of participants.

Table 6. The frequency values belonging to the possible obstacles before the usage of OER by the teachers

The possible obstacles that stand before the usage of an open educational resource by the teachers	f	%
"I have an issue of internet bandwidth quota."	42	8,3
"I cannot allocate the necessary time."	317	63
"I do not have the necessary knowledge to use them."	182	36,2
"I consider the usage of an open educational resource unnecessary."	5	0,1
"I do not find open educational resources useful."	8	0,16
"I do not find the content of the open educational resources reliable."	10	0,2
"I have not been encouraged to use OER by my supervisors."	105	20,9
"I believe the usage of an open educational resource is a difficult chore."	16	0,3
"I cannot find an open educational resource aiming at my specialty field."	80	15,9
"I cannot find an open educational resource aiming at my hobbies."	37	7,4
"I do not possess adequate knowledge of a foreign language in order to make use of the non-Turkish open educational resources."	125	24,9
"I believe my literacy of technology is inadequate."	88	17,5
"I consider the in-service training programs to be inadequate."	171	34

The participants have been asked question of whether they made ready any digital course materials of their own design at domestic or global OER repositories. According to the findings, only 67 (11,4%) of the teachers created their own digital materials for use in OER platforms; whereas 521 (88,6%) have stated that they did not. The teachers, who had created OER materials, have been asked about the types of platforms they shared their created content. Fifty teachers responded and the results have been presented in the Table 7.

Table 7. The frequency values belonging to the platforms through which the teachers who make ready a digital course material make a sharing

The platform on which the digital course materials are shared	f	%
EBA	42	84
Kahoot	2	4
Scientix	1	2
Udemy	1	2
Wordwall	1	2
girisimciogretmen.com	1	2
Edebiyat TV	1	2
e-Twinning	1	2
Total	**50**	**100 %**

The state of OER usage by the teachers have been put to examination from the angle of the variables involving gender, age, year of seniority, educational background, specialty field, the level of school they worked in, their tasks in the said school, the type of their school, and the location of their school. The findings that have been acquired have been presented in the Table 8.

Table 8. The chi square results of the state of OER use by teachers depending on the related variables

Yes		The State of OER Usage					
		Yes	No	N	X^2	Sd	p
Gender	Woman	328	39	367	7,371	1	.007
	Man	180	41	221			
Age	22-30	204	30	234	0,211	2	.900
	31-40	211	35	246			
	41 and above	93	15	108			
Year of Employment	0-5 years	196	34	230	3,531	3	.317
	6-10 years	124	17	141			
	11-15 years	84	8	92			
	16 and above	104	21	125			
Educational Background	Bachelor's Degree	351	66	417	3,031	2	.079
	Master's Degree	147	13	160			
	Doctoral Degree	10	1	11			
Specialty Field	Information Technologies	178	30	208	0,183	1	.669
	Other	330	50	380			
Level of School	Kindergarten	19	4	23	1,076	3	.783
	Primary School	75	9	84			
	Secondary School	233	36	269			
	High School	181	31	212			
Task at School	Director/Assistant Director	45	6	51	0,161	1	.688
	Teacher	463	74	537			
Type of School	Public	412	70	482	1,914	1	.166
	Private	96	10	106			
Location of School	City Center	171	21	192	2,831	2	.243
	County	281	46	327			
	Village	56	13	69			

As is evident from the Table 8; according to the result of the chi-square analysis that was made in order to determine whether there is any difference in between the state of OER usage for the purpose of their personal and vocational developments and their genders, a significant difference has been found statistically in between the state of OER usage and the variable of gender (χ^2=7,371, p<0,05). Upon examination of the related values, it may be stated that the women make use of OERs far more for their personal and vocational development in comparison to men. Nevertheless, No significant difference has been found in between the state of OER usage and the variables of age (χ^2=0,211, p>0,05), year of employment (χ^2=3,531, p>0,05), educational background (χ^2=3,031, p>0,05), specialty field (χ^2=0,183, p>0,05), the level of the school where they work (χ^2=1,076, p>0,05),the task at the school χ^2=0,161, p>0,05), the type of the school (χ^2=1,914, p>0,05) or the location of school (χ^2=2,831, p>0,05).

The study proceeded to investigate the types of potential benefits OER usage has yielded for the personal and vocational development of the teachers. An interview has been conducted with ten teachers for answering this question and the related results have been examined using content analysis. Findings acquired have been presented in Table 9.

Table 9. The opinions of the teachers aiming at the benefits that the OER usage provides for their personal and vocational developments

Themes	Frequency	Exemplary Situation
Saving on Time and Space	6	O8: *We may sometimes have difficulty in face-to-face participation in the courses because of workload, the rush in daily life. Nevertheless, I can say that the OER may reduce the happening and the possibility of happening of the said difficulties. The sites that present OER provide related resources and videos relating to many fields in which I am willing to improve myself both vocationally and personally for me. Moreover, thanks to the OERs, I can arrange the training that I wish to receive, the resources that I wish to make use of or the videos that I wish to watch in line with my own time and order together with my workload. The idea of self-development by way of benefiting from the large information on the internet without getting restricted in the sense of time and space seems desirable and provides me with many benefits as I have already stated.*
Up-to-Dateness	4	O1: *The OER ensure that the teachers get informed on the current studies in their own fields. In the end, everything changes instantaneously depending on the technology, it must be kept track of on a continuous basis. The OERs is an opportunity for this reason.*

As is evident from the Table 9; the two basic opinions on the benefits of the OER usage have been collected under the two basic themes. The themes are made up of a) saving on time, space, and b) up-to-dateness. The entirety of the teachers with whom an interview has been conducted; have managed the benefits brought along by the OER in the form of personal and vocational. 6 of the teachers have delivered opinions under the theme of saving on time and space and have made the statement that the greatest benefit that is brought along by the OER in the form of personal and vocationally is the accessibility of the trainings and information without being depending on the time and place while you are short of time. Whereas, under the title of up-to-dateness being the other theme, 4 teachers have delivered their opinions. The teachers have stated that the greatest benefit that is brought about by the OER is the accessibility of the current information; as a result, they could perform up-to-dateness of themselves rapidly and with ease, both personally and vocationally.

The type of expectations that the teachers have relating to their employing organization to continue with their personal and vocational developments through the OER have been made a matter of research. The opinions that have been acquired from the teachers on this matter have been presented in Table 10.

Table 10. Opinions relating to the expectations that the teachers have from the organization where they officiate aiming at the usage of the OER

Themes	Frequency	Exemplary Opinions
Awareness	6	O6: *Aiming at the teachers without some knowledge on the OER, cooperation may be established on a local basis meaning that through the national education directorates of provinces and counties, and distance education have to be held instead of having an expectation from the ministry in any case. As a result, the said OER or platforms may get promoted. As the recognition of the resources grows following the promotions, the usage level of the AKE will increase as directly proportional.*
Support/ Encouragement	4	O2: *The administrators must do the referrals that will ensure that the teachers will make use of such platforms. Moreover, he must take the lead by way of making use of it by himself.*

According to the Table 10; the expectations of the teachers from the organization where they officiate on the matter of OER have been collected under two themes. The themes consist of a) awareness and b) support/ encouragement. 6 out of 10 teachers have shared opinion under the theme of awareness and they have made the statement that they expect that groups of communities that give information upon the description of OER, the manner of their usage, the way they can be prepared all of which can boost the awareness of the teachers, should be established throughout meetings or seminars. 4 teachers have shared opinions under the theme of support/encouragement. These teachers have made the statement that they expect that the support and encouragement are required to ensure the usage of OER as well as their sustainability.

The related expectations of teachers from MEB through the OER to continue with their personal and vocational development have been investigated. Findings t based on content analysis have been presented in Table 11.

Table 11. Opinions relating to the expectations of the teachers from MEB aiming at the OER usage

Themes	Frequency	Exemplary Opinions
Quantitative and qualitative improvement of resources	7	**O9:** *EBA provides a field of vocational development; nevertheless, if you ask about its adequacy, in my opinion not at all. Therefore, MEB must perform the promotion and announcement of the resources that it established or will establish very well.*
Educational Support	2	**O6:** *I consider that as part of the online trainings that will be held, the promotion of the OERs that will be of use to our part can be made by the hand of the ministry meaning that, a single information known about by one person considering it too simple for himself may become a golden opportunity. Thanks to the said trainings, we will thereby provide the opportunity of disseminating an information belonging to an employee who is knowledgeable additionally.*
Cooperation	1	**O4:** *In my opinion, the matter of OER cannot be only just determined by MEB. A cooperation is required on the said matter. For instance, we are provided with many trainings; maybe the teacher is not in need of the given training or is not concerned with it. Moreover, he may have received the said training before; trainings are offered to us before receiving opinions, without putting forward suggestions at all. I consider that if MEB receives opinions of the teachers, it will be useful; this issue is valid for OER as well.*

According to the data given in the Table 11; the expectations of the teachers from MEB on the OER usage has been collected under three themes. These consist of a) a quantitative and qualitative improvement of resources, b) the educational support and c) cooperation. 7 teachers out of 10, who put forward their opinions, have stated that they have the expectation that the number of the present resources should be increased by MEB. The teachers have emphasized that the EBA platform is useful; nevertheless, lacking in certain aspects. Whereas, under the theme of educational support, 2 teachers have made the statement that they have expectation that a platform to be established on the matter of OER, information provided, and training sessions organized by MEB. One teacher has expressed the expectation from MEB towards cooperation with teachers upon OER usage.

DISCUSSION AND CONCLUSION

According to one findings of this study, it has been shown that 402 teachers out of 588 are knowledgeable on the notion of OER. These teachers gained their knowledge on OER from most prominently from social media posts, followed by their colleagues and undergraduate courses during their studentship. Being an OER repository, the Teachers Pay Teachers platform, which is used by 85% of teachers in the USA (Hahm, 2020), states that most of the teachers have heard about it on Instagram, a social media platform (Reinstein, 2018). This information is in line with the findings of this study and may indicate that the number of social network users, which is already high, has increased further during the pandemic and that social networks play an informative role.

However, 186 teachers stated that they have no knowledge about OER, which is still considered to be a high number. Based on this finding, it can be inferred that teachers need to be informed and guided about OER. Similarly, in the study conducted by Ozdemir and Bonk (2017), it was revealed that teachers had good knowledge about OER, but no research was conducted on how or where they acquired this knowledge. In addition, a study conducted by Peregrino et al. (2020) also obtained related results. According to their study, teachers' awareness levels about OER were found to be fair. Based on this information, it can be concluded that teachers in this study have also demonstrated a fair level of awareness about OER and refer to these sources for their development. In contrast, Baas et al. (2019) obtained different results in their research. The said study revealed that the level of knowledge on OER among university instructors was lower than expected, and as a result, participants also reported hesitation in using these resources. The main reasons for their hesitation could be potential difficulties in licensing or not receiving encouragement/appreciation from their colleagues or supervisors on the notion of using OER. On the other hand, Marin et al. (2022) emphasized that in some countries, such as Japan, K-12 teachers use OER at a higher rate than college level instructors.

Another outcome that has been acquired in the study is that more than one half of the teachers that had participated in the study are not only knowledgeable on OER platforms but are also actively using them. The teachers were asked about the purposes for which they have made use of the OER, and it has emerged that they have made use of the said resources mostly for the purpose of vocational development. This situation may indicate that the teachers are willing towards professional development. It has been shown that near one half of the teachers made use of the said resources not only for vocational development but also for personal development. Nevertheless, the ratio of usage of OER solely for the purpose of personal development amounts to 3,9%. The fact that teachers tend to use OER for professional personal development can be attributed to many reasons. One of them may be that the Ministry, to which teachers are affiliated, supports teachers more in the direction of professional development. Examples of these are the EBA platform being launched by the Ministry of Education in Turkiye exclusively for the use of teachers' personal development. Similar platforms have been reported in literature as Procomun for teachers affiliated with the Spanish Ministry of Education, Scootle for teachers from Australia, and Edutags in Germany (Marin et al., 2022). Research has been done upon the types of the OER platforms that the teachers have made use of for the purpose of their personal and vocational developments. Based on the findings; it was observed that EBA platform was far more popularly used in comparison with other platforms. Furthermore, teachers have also provided statements reporting that they were far more likely to use EBA for the purpose of vocational development. EBA in this manner has been followed by The Distance Education Gate, another platform the participants reported to using primarily for vocational development. A third entry in the most popular OER platforms list is the BTK Academy, which was also most likely used for professional development. Participant responses in this manner have been consistent with their answers to previous questions. Nevertheless, it has become evident that the teachers preferred domestic OER repositories to global (non-Turkish) ones. The usage ratio of platforms OER Commons, Connexions and MERLOT reflects this phenomenon. This may be due to either inadequate foreign language skills of teachers or the teachers not being referred to these global resources by administrative structures. As such, in response to the question related to the obstacles against OER usage, 125 teachers in this study have responded "I do not possess a foreign language knowledge enough to make use of global OER repositories." Consequently, it may be stated that the teachers expect foreign language support or at least a translation into Turkish of the said global resources. In addition, this finding also shows that there is a need for more OERs developed in Turkish. Cachia et al. (2020) and Ruiperez-Valiente et al. (2020) also emphasized cultural differences in the use of OERs and the importance of local OER production.

Another finding of the study has shown that the greatest obstacle standing between teachers and OER usage is a lack of time. Nearly all of teachers have agreed with the statement that they would be willing to make use of the OER if not for their heavy workload and lack of time in personal lives and that they could not find spare time for using the said resources. Furthermore, they have made the statement that even if they had spared time or had wished to spare time, there were not enough organized in-service training programs that would provide an opportunity for them to be engaged with OER. Additionally, sixteen teachers made the statement that it was difficult to make use of the OER. This finding is like the findings of Tang (2020) and Tang and Bao (2021). However, as part of the study that is conducted by Tang et al. (2020), a finding to the contrary has been acquired. As part of the latter study, the teachers have made the statement that the usage of the OER are not difficult at all and the factor of ease of use is correlated with the state of adoption of OER. Still though, as part of the interview that was made with Martin Weller by Koseoglu and Bozkurt (2018), it has been stated that the greatest obstacle before the OER usage and adoption is teacher awareness. Therefore, educational institution administrators are required to implement practices that increase teachers' awareness of OER, to increase the rate of adoption and use. For example, Katz and Van Allen (2020) and Morgan (2020) stated that librarians and instructional designers in educational institutions can help teachers use OER. Tang et al., (2021) also emphasized that school administrators and professional development experts should allocate time for assisting teachers in learning how to use OER. According to Koseoglu and Bozkurt (2018), it was stated that the quality of OER is also a controversy, and this is an important obstacle against their adoption.

Ossiannilsson (2021) also emphasized the importance of providing effective, inclusive, and equitable access to quality OER. In today's world, where information technology is intensely used, the production and

sharing of OER is as important as their usage. In this context, the current study also focused on whether teachers have prepared digital course materials for being shared over OER platforms and if they did, on which platforms they shared the said materials. According to the findings, it has become evident that only 11,4 % of teachers created digital learning materials to be shared over OER platforms; and the platform of choice for sharing these have mostly been EBA. As part of the research that was conducted by Bass et al. (2019), findings indicating that teachers are far more likely to create digital learning materials for their own personal accounts and not share them over OER platforms. In this context, it may be interpreted that the teachers need greater support not only in the production of digital course materials but also in the grasping the rationale behind sharing of the given materials, i.e., openness. The teachers with whom the researchers of this study have interviewed have also drawn attention to this situation. Similar findings have been acquired at a study conducted by Adnan et al. (2021). As part of the related study, the statement has been made that they need cooperation and vocational support at the point of the production and sharing of OER. Nevertheless, as part of the study that Kursun (2011) conducted with university instructors; the outcome that the academicians felt at ease and willing at the point of production of OER, without a need for external support, has been noted.

As part of the study, the state of the OER usage has been examined in respect with certain variables. It has become evident that female teachers made use of OER more as compared to their male counterparts. A similar difference is reported in a study that conducted by Adnan et al. (2021). However, as part of the latter study, the outcome that male university instructors made greater use of OER in comparison with female counterparts has also been shared. Based on these findings, it may be inferred that female teachers working in K12 schools, are far more concerned with using OER as opposed to female university instructors. Nevertheless, further research is necessary to test this claim.

State of the OER usage by teachers has been examined also in relation to age. It was expected that OER usage ratio of teachers between ages 22-30 would be making greater use of OER, owing to the inclination that they use information technology more prominently than their peers in previous generations. This expectation has not been reflected statistically. Moreover, it was observed that the greater number of participants in the study belonged to the 31-40 age group. In this context, no significant difference has been observed in terms of state of the OER usage based on teacher age. This finding may be interpreted as OER use being more dependent on other factors such as personal interest, perceived benefit, or encouragement by supervisors, which are all considered irrelevant of age. A study conducted by Adnan et al. (2021) has illustrated that university instructors at the age group of 46-55 and displayed marginally low incidence for both using or creating OER. Age factor therefore may still be a critical point of consideration in OER usage and production and yet; it should be considered that there exists a divide between senior teachers and their younger counterparts originating from the inclusion of the subject of OER in teacher training programs in the near past.

Years of employment as a teacher has been another variable that was examined. It has been determined that majority of the participating teachers have been employed between 0 to 5 years. Statistical analyses investigating a relationship between OER usage, and the year of employment has yielded no significant result. In other words, just as well as age, OER usage is not influenced by seniority as a teacher. In Adnan et al. (2021)'s study, it has been found that the state of the OER usage in university instructors with 0 to 5 years of employment has been found to be lower than that of instructors with greater level of professional experience. Such contradicting outcomes may have stemmed from the differences in group composition of the two studies.

Another variable that has been investigated for potential influence upon OER usage has been educational background. It has been theorized that a greater attainment of educational level would boost the awareness towards and hence, the state of usage of OER. However, majority of participants in this study possessed undergraduate degrees, with a few Master's degrees and even fewer doctoral degrees. With this group of participants, statistical analyses have indicated that OER use is not influenced by educational background A glance at the literature reveals contradicting results: in Peregrino et al. (2020), a medium-level positive correlation has been found between the state of the OER usage and educational background. It is considered that the root cause of contradiction may, again, be due to differences in group composition not only in terms of educational background but also in terms of knowledge, interest, and awareness levels on OER.

Specialty field has also been considered as a factor that may potentially affect state of OER usage. Although it has been theorized that a difference may exist between the state of the OER usage between information technologies (or, computer science) teachers as opposed to teachers from other specialty fields (math, science, literature, arts, etc.), no statistical evidence has been found to support this claim. The reason may be because participating information technologies teachers in the research being somehow less than the number of the teachers from other specialty fields.

The last set of variables that have been examined in relation to state of OER use have been a) the type of school, b) teacher's appointed task at the school c) the level of school and d) the location of school. No difference pertaining to the state of OER use has been found in any of the categories of these variables. Based on these outcomes, it may be interpreted that the state of the OER usage of the teachers does not matter whether they work in kindergarten, primary or high school; nor does it depend on the school's status as private or public, nor whether the school operates in an urban or rural setting nor if the participant is tasked with additional administrative duties or not.

In conclusion, the findings that are acquired within the scope of the present research and the examinations of the field literature indicate that although OER have been around for a long time; nevertheless, it was not until the COVID-19 outbreak that they garnered the attention they deserved. The fact that the number of academic studies conducted in Turkiye, which examine OER use is scarce is supportive of this claim. Considering that education is being reinterpreted in the post-COVID world, the significance of OER will be felt stronger than ever in the upcoming years. It is considered that individuals, who are willing to develop themselves, in professional capacity or otherwise, may make greater use of these resources in the future. This, in turn, will be supportive of lifelong learning activities of individuals in a natural manner. Therefore, it can be inferred that the need for countries, institutions, and individuals to closely monitor and adapt to the changes and developments will become a necessity. In this context, it can be said that there are significant responsibilities for the Higher Education Council and the Ministry of National Education in Turkiye to ensure that the importance of OER is felt by all segments of society. This way, societal awareness about OER can be cultivated.

Suggestions

The research results offer the following recommendations to decision-makers, implementers, and researchers involved in this topic:

- Providing specialized training on OER during seminar periods organized for teachers is crucial for enhancing OER awareness and utilization. Teachers knowing how to access these resources and use them can have positive contributions to their personal and professional development.
- MEB should establish central and local units dedicated to OER preparation. This can ensure that OER content is prepared according to specific criteria, leading to improved quality.
- Necessary arrangements should be made to facilitate intra-departmental and inter-departmental collaboration on OER in schools.
- Schools should create educational technology units led by education technologists, preferably information technologies (or, computer science) teachers. This will facilitate awareness-raising efforts regarding OER at the school level.
- MEB should establish a dedicated website for OER –like EBA and OBA– where only OER content is shared. Subject-specific resources should be provided on this website.
- Teachers accessing and contributing a certain number of digital teaching materials through the OER website on MEBBIS should be provided with both financial compensation and professional recognition. This will encourage teachers to develop their own materials instead of relying on ready-made resources.
- Additionally, teachers who contribute a considerable number of digital teaching materials through the OER website on MEBBIS should also be awarded service points. This will incentivize the production of digital teaching materials and lead to an increase in knowledge and the promotion of digital teaching materials.

- It is crucial to ensure that administrators, particularly school principals, possess knowledge about OER. Including OER-related questions in principalship exams can be a significant step towards guiding teachers to these resources.
- There is a noticeable difference in the number of OER initiatives between Turkiye and the rest of the world. Therefore, comprehensive OER preparation should be conducted by universities under the supervision of the Higher Education Council and by MEB for primary and secondary education. This will enable all stakeholders to access educational content more easily during future crises or when technology needs to be further integrated into educational systems.
- Elective courses related to the use and production of digital teaching materials should be prepared in all departments of undergraduate schools of education, and teacher candidates should be encouraged to take these courses. If possible, they should also be made compulsory. This will ensure that future teachers are aware of OER before starting their teaching careers.
- This research aimed to include teachers from as many specialty fields as possible. In future studies, branch-specific research can be conducted, and results can be presented. Furthermore, branch-based comparisons can also be made.
- The research attempted to reach teachers from all regions of Turkiye. Future studies can be conducted on a regional or provincial basis. This will enable comparisons between regions or provinces and facilitate decision-making for general or specific policies.

Authors' Note: This article reflects findings from master's thesis study of Soner Altintas, titled the Evaluation of the Habits of Usage of Open Educational Resources by Teachers Aiming at Their Personal and Vocational Development from the Angle of the Tendencies to Lifelong Learning.

BIODATA and CONTACT ADDRESSES of AUTHORS

Dr. Nilgun TOSUN is a Professor of Open and Distance Education at Computer Education and Instructional Technologies Department, Education Faculty, Trakya University. Dr. Tosun gained her Ph.D. in Computer Engineering, 2006. She served as Vice Principal between 2006 and 2009 at Trakya University Distance Learning Center, where she was one of the founders. She served as Vice Principal and Head of Technical Departments between 2007 and 2008 at Tunca Vocational High School giving distance education and Head of Department between 2008 and 2012 at Trakya University Computer Education and Instructional Technologies Department. Her academic interest areas are open and distance learning, e-learning, safety in social networks and internet, digital parenting, digital citizenship, and use of internet and social networks in education.

Nilgun TOSUN
Computer Education and Instructional Technologies Department, Education Faculty
Address: Trakya University, 22030, Edirne, Turkiye
Phone: +90 5549985616,
E-mail: nilgunt@trakya.edu.tr

Soner ALTINTAS is a Lecturer at Kirklareli University Luleburgaz Vocational School, Department of Computer Technologies. He completed his undergraduate and graduate education in the Department of Computer Education and Instructional Technology. His research interests include open educational resources, digital literacy, technology integration in education, programming education and web 2.0 tools. He has international articles and book chapters in related fields. He is also a journal editor of an international scientific journal.

Soner ALTINTAS
Department of Computer Technologies, Luleburgaz Vocational School
Address: Luleburgaz Vocational School, 39750, Kirklareli, Turkiye
Phone: +90 2884174996
E-mail: soneraltintas@klu.edu.tr

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