Turkish Teachers' Awareness and Perceptions of Open Educational Resources

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Abstract: The purpose of this study is to explore K-12 teachers' awareness of open educational resources (OER) as well as their perceptions of its potential opportunities and challenges for teaching practices. Data were gathered from 99 online survey respondents and six interviewees in this study. Findings showed that teachers are aware of OER to a certain degree; however, a misunderstanding exists between digital educational content on the Internet and openly licensed content compatible with the OER definition. Lack of knowledge regarding licensing mechanisms of OER is a major issue among teachers. Whereas, teacher perceptions that the use of OER leads to the improvement in student performance is highly beneficial, the time required to search, select, edit, and apply OER was discovered as the greatest challenge to OER utilization. Results of this study can inform potential OER movement contributors, such as teacher professional development specialists, developers of OER repositories, and academics interested in OER.

Keywords: Open Educational Resources, OER, K-12 Educators, OER Awareness, OER Challenges.

Introduction

As UNESCO (2010) suggested, "universal access to high quality education is key to the building of peace, sustainable social and economic development, and intercultural dialogue." To help learners in utilizing high quality educational content and materials, open educational resources (OER) offer free accessibility to important content as well as opportunities for reusability and sharing (Willems & Bossu, 2012). Due, in part, to projects from organizations like UNESCO and the Massachusetts Institute of Technology (MIT), the development and use of OER has accelerated and is part of many educational conversations around the world (Bonk, 2009). As such, it has influenced the Turkish educational system as well.

The Turkish Ministry of National Education (MEB) initiated the Educational Information Network (EBA) project in 2012. The main purpose of this project is to support technology integration in K-12 settings through e-content that would be developed by MEB units, educational institutions, teachers, and students. In addition to the EBA project, Hylén, Damme, Mulder, and D'Antoni (2012), indicated that Turkey was among the five OECD member countries (i.e., Hungary, the Netherlands, Switzerland, Turkey, and the United States) that promote the OER movement through both special

projects and government initiatives. Although OER use has been encouraged, there is a lack of research focusing on OER perceptions of K-12 teachers in Turkey.

OER has become a core component of open education in higher educational settings (Mulder, 2015). Not surprisingly, previous studies on the OER movement have mainly focused on higher education (Kimmons, 2014; Zancanaro, Todesco & Ramos, 2015) and have illuminated many of the potential barriers, opportunities, and enablers of the OER movement in higher education institutions and organizations from faculty perspectives (Kursun, Cagiltay, & Can, 2014). Thus, it is vital to begin to understand the current status of primary and secondary teachers' awareness of OER. Research in this area can raise attention to the relationship between OER and K-12 settings.

Several OER related studies have been conducted in specific regions of the world (Cobo, 2013; Zancanaro et al, 2015). According to bibliometric analysis on OER conducted by Zancanaro et al. (2015), North American and European countries have been the centre of OER research. Along these same lines, Cobo (2013) highlighted that researchers mostly targeted English-speaking establishments to investigate the OER movement. Thus, it is crucial to conduct OER studies in different countries and different continents. Clearly, a pressing need exists in regards to investigating OER in non-English speaking countries, such as Turkey.

To some degree, the implementation of OER projects depends on identifying potential challenges and opportunities of OER use in teaching practice (Bissell & Boyle, 2007; Richter et al., 2014). In K-12 classrooms, teachers are facilitators of the teaching process and potential users of OER. Enhanced understanding of teachers' OER awareness and perceptions of OER will be decisive in bringing to light these challenges and opportunities. Such understanding will inform teacher professional development specialists, developers of OER repositories, academics interested in OER, and EBA project administrators who have the potential to contribute to the improvement of the OER movement.

Due to the reasons explained above, this study was conducted in K-12 settings in a non-English speaking country—Turkey—which bridges Eastern Europe and Western Asia. The purpose of this study is to investigate K-12 teachers' awareness of OER and perceptions of its potential challenges and opportunities.

Literature Review

In this study, a globally accepted definition of OER created by UNESCO and Commonwealth of Learning (COL) in 2012 was adopted:

> Open Educational Resources are teaching, learning and research materials in any medium, digital or otherwise, that resides in the public domain or has been released under an open license that permits no cost access, use, adaptation and redistribution by others with no or limited restrictions.

The concept 'open' is ambiguous and has been the focus of discussions meant to build a common understanding of its meaning in the OER movement. Indeed, 'open' is a multifaceted term referring to diverse ideas and does not solely imply monetary issues but also relates to ownership and usage rights (Johnson, Becker, Estrada & Freeman, 2014). Hilton, Wiley, Stein, and Johnson (2010) inferred

from the discussions revolving around the meaning of the concept 'open' that "openness is not like a light switch that is either 'on' or 'off.' Rather, it is like a dimmer switch, with varying degrees of openness" (p. 38).

In regards to the openness and ownership issues of OER, Wiley (2015) suggested the 5Rs (Retain, Reuse, Revise, Remix, and Redistribute) model to clarify some of the rights that can be incorporated with OER development and use. In resolving intellectual property rights and providing flexibility to OER developers and users, Creative Commons (CC) license attributions became a key aspect of the OER movement (Creative Commons, 2015; Reed, 2012).

Whereas, some of the previous studies showed that awareness of the OER movement among educators is low (Pawlowski & Hoel, 2012; Rolfe, 2012), a recent study conducted by Acros, Farrow, Perryman, Pitt, and Weller (2014) reported that such awareness has been growing. Rolfe (2012) found that just nine out of 50 (i.e., 18%) of the academic staff who worked in a UK university had even heard of the term OER. During the same year, Reed (2012) found that only 32% of the 59 participants from the two different UK universities in his study were aware of the open content movement. In another study, Allen and Seaman (2014) surveyed faculty members working in US universities and found that, out of 2,144 respondents, approximately 33% (n = 707) were aware of OER.

Although OER studies have taken place primarily in higher education contexts, it is still possible to find OER research related to K-12 school settings. In Germany, Richter and Ehler (2011) implemented focus group interviews with 16 teachers who teach primary, junior high, and high school and secondary courses and found that, in general, teachers recognize the concept of OER. Boston Consulting Group (2013) analysis of survey data from 377 K-12 educators revealed that slightly more than 50% of OER users are somewhat aware of OER in the United States. In terms of the near future, most hope to become better informed of ways to integrate such free and open resources into their teaching activities and assignments in the next three years; such findings were especially true for faculty members from health-related disciplines and the natural sciences and relatively lower for computer and information science faculty members.

Decreasing the cost of education for students has become possible through OER use in classrooms. Bliss, Robinson, Hilton, and Wiley (2013) found that the cost college students pay for textbooks in a semester decreases by nearly 80% after adopting open textbooks. Additionally, the availability of openly available content enables educators and their learners to benefit from a wide range of topics and subjects offered by OER, thereby lending greater flexibility to both content selection as well as the resulting learning environment and potential instructional strategies that can be embedded within it (Geser, 2007). Fourteen states and 40 districts in the U.S., including Utah, offer policies regarding the OER movement (U.S. Department of Education, 2016).

The Open High School of Utah (OHSU), an online public charter school where teachers rely solely on OER utilization in their teaching practices, provides a substantive contribution to the OER movement in the state. In one study (Tonks, Weston, Wiley, & Barbour, 2013), OHSU teachers stated that they are able to save time in lectures through repurposing course content and material and customizing lesson plans based on students' learning needs. Another benefit was that OHSU administrators are no longer obligated to pay huge amounts of money to the content providers by using OER (Tonks et

al., 2013). Repurposing existing OER can also enable educators to avoid the unnecessary duplication of course design and delivery (Butcher & Hoosen, 2012; Willem & Busso, 2012).

While there are myriad benefits from OER adoption, a range of factors has decelerated the OER movement. A prominent challenge is that of assuring the accuracy of information diffused through OER and its overall quality (Mishra & Kanwar, 2015; Wiley & Gurrell, 2009). A shortage of incentives stands out as a different impediment threatening the OER movement's growth and sustainability (Sclater, 2011). Additionally, time to develop new materials as well as the time required to later maintain and update existing resources are discouraging factors for OER contributors (Sclater, 2009).

Another deterrent that slows down OER expansion among college and university faculty members and across institutions is the lack of awareness regarding licensing mechanisms for open content (Bissell, 2009; Wiley & Gurrel, 2009). Similarly, Kimmons (2014) concluded that copyright is also a problematic issue among K-12 teachers, which causes misinterpretation and misconception regarding licensing mechanisms in OER.

Methods

This study utilized a questionnaire and follow-up semi-structured interviews with identified respondents from the survey (Creswell, 2012). It was conducted to explore K-12 teachers' awareness of OER and perceptions of its potential. The following three research questions guided this study:

1. To what extent are teachers aware of open educational resources?
2. What do teachers perceive as the benefits of open educational resources for teaching purposes?
3. What do teachers perceive as the deterrents of open educational resources for teaching purposes?

Participants and Settings

An email listserv of a non-governmental teacher association (TA) located in Istanbul, Turkey was used to recruit study participants. Each K-12 teacher in Turkey could freely register to this email listserv, with the goal of being better informed regarding educational developments and activities occurring in the country. The ultimate aim of this TA was to support professional, personal, and social development of K-12 teachers by organizing professional development activities, seminars, and national and international conferences for its members. It is important to note that the open education movement has never been part of the events of this TA; hence, OER use has not been explicitly highlighted or demonstrated. In addition, social and cultural programmes to strengthen the network between teachers were arranged by the TA. Both professional and social activities organized by this particular TA usually required a participation fee.

A list-based sampling frame (Fricker, 2008) was adopted to recruit online survey participants. In total, 99 valid responses were gathered. While 92 respondents worked in public schools, seven of them worked in private schools. School setting, gender, and age-range distributions of the respondents are recapped in Table 1. As is evident, most of the 99 participants were male (n = 61).

They were also relatively young with most under age 45 (n = 72). These participants also were fairly well distributed across grade levels.

The survey respondents were asked if they were interested in participating in an interview lasting about 30 minutes. Fortunately, 31 of the total 99 respondents stated they were willing to become an interviewee. The researchers attempted to reach out to them using the contact information that they had provided through the survey; however, a majority of them were either inaccessible or had changed their mind and did not want to be interviewed. Eventually, the researchers were able to conduct interviews with six of the survey participants. Table 2 provides some key demographic and other data regarding the interview participants.

Table 1: Survey Participants

Gender	F	%
Male	61	61.6
Female	38	38.4
Total	99	100.0
School Settings		
High School	35	35.4
Middle School	35	35.4
Elementary School	22	22.7
Pre-school	7	7.1
Total	99	100.0
Age Range		
Less than 25	2	2.0
25 – 34	34	34.3
34 - 44	36	36.4
45 – 54	23	23.2
55+	4	4.0
Total	99	100.0

Table 2: Interview Participants

Pseudonyms	Gender	Age	Experience (in Years)	School Type	School Setting	Subject
Gonca	F	32	10	PS	MS	Math
Selin	F	27	5	PS	MS	Information Technology
Fatih	M	34	12	PS	MS	Turkish Language
Hakan	M	33	10	PS	MS	Religious Studies
Sinem	F	45	28	PS	ES	Multiple Subjects
Cenk	M	26	2	PrS	ES	Multiple Subjects

NOTE: F: Female. M: Male. PS: Public School. PrS: Private School MS: Middle School ES: Elementary School

Instruments/Data Sources

A pre-existing survey was modified for this study. Originally, the survey was developed by Allen and Seaman (2014) for their exploration of OER awareness and experiences of faculty members working in US universities. For the purpose of the current study, the survey was translated into the Turkish language and modified by two native Turkish-speaking researchers. The resulting survey data was collected during the spring of 2015.

In order to improve the validity of the survey, one of the researchers implemented think-aloud cognitive interview sessions (Dillman, Smyth, & Christian, 2014) of up to 10 minutes long with three volunteers. As a result of those sessions, the researchers were able to observe volunteers while they were taking the survey and identify issues, such as wording, question order, visual design, and navigation. This process helped to fix problems before starting the actual data collection process. Additionally, pilot testing conducted with three volunteers and two subject matter experts (SMEs) provided feedback about the survey content and its design.

The responses to the survey were enhanced by face-to-face follow-up semi-structured interviews with six teachers during the summer of 2015. Interview data was helpful for the researchers to clarify the interpretation of the survey results (Creswell, 2012). Interview sessions were audio-recorded and were later transcribed. Investigator triangulation and member checking techniques were applied to establish the trustworthiness of the interview data (Russ-Eft & Preskill, 2009). The length of the interviews varied between 10 and 30 minutes.

Data Analysis

Before conducting an analysis of the survey data, an examination was performed on the data to determine if any problems regarding invalid responses, outliers, and other problems occurred. This particular analysis resulted in the removal of three invalid responses. To further evaluate and understand the survey data, descriptive statistical analyses in SPSS were calculated including the means, standard deviations, and frequencies of the responses.

For the analysis of interview data, a thematic analysis approach (Carspecken, 1996) was utilized. As part of this process, the data from the six interviews were coded and potential themes were sorted and identified.

Results

The following section is organized based on the findings related to each research question. For each research question, descriptive statistical analyses of the survey data were reported as a major data source. Additionally, the findings from the interview data were embedded in an attempt to gain a deeper understanding of Turkish K-12 teachers' awareness of OER as well as their perceptions of the benefits and challenges of OER.

Research Question 1: To what extent are teachers aware of open educational resources?

Eight five-point (1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree) Likert-scale items, displayed in Table 3, were included in the survey to measure the OER awareness level of teachers. In the SPSS software, computation of means of those eight items created a new variable called *awareness*. Cronbach's alpha for the eight awareness items was .91. Mean and standard deviation values for the awareness variable were computed (*M = 3.66, SD = 0.83*). Findings regarding the awareness variable suggested that teachers are aware of OER to a certain extent.

The highest reported item related to OER for K-12 teachers was regarding the significance of OER sharing (*M = 3.89, SD = 1.05*). Mean scores and standard deviations for the items of awareness variable are displayed in Table 3 in ascending order by means. It is important to note that the sharing and reusability aspects of OER were rated the highest of these eight questions related to awareness, while the bottom rated two items related to the free cost or utilization of OER.

Table 3: Awareness of teachers in regards to different aspects of OER (from low to high)

Items (Likert Scale: 1 = Strongly Disagree to 5 = Strongly Agree)	Mean	SD
OER is available for free of charge	3.20	1.24
OER is provided with a license that allows free utilization	3.42	1.11
OER has the ability to remix with existing educational resources	3.63	.99
OER has the ability to repurpose	3.73	1.07
OER can be redistributed after it is modified	3.76	.99
Continual development of educational resources is important to OER	3.78	.95
OER is reusable	3.79	0.99
Sharing is important to OER	3.89	1.05

Interview findings in relation to teachers' OER awareness revealed a lack of knowledge related to the definition of OER. In contrast to the survey results, none of the interviewees mentioned licensing mechanism of OER materials. For instance, one participant, Selin, stated:

> "… any material on the internet that is freely accessible is an OER as long as it provides useful information for learners." Similar expression was given by another participant,

Hakan: "To me, any kinds of educational resources on the internet which are open to access for anybody at a minimum or no cost is an OER as long as it includes reliable information."

A licensing mechanism is one of the major components of OER and it is also considered in this study. Teachers expressed their knowledge of licenses listed on the survey with possible answers (i.e., 1 = Never heard, 2 = Heard but don't know anything about it, 3 = Have little information about it but don't know exemplary cases of use, 4 = Have little information about it and can give some exemplary cases of use, 5 = Have detailed information about it and can give a lot of exemplary cases of use). It was found that teachers are highly unaware of the CC license mechanism itself. Table 4 displays teachers' awareness of specific license mechanisms in ascending order by mean scores.

Table 4: How aware are you of each of the following licensing mechanisms?

Items (Likert Scale: 1 = Never heard to 5 = Have detail information about it and can give a lot of exemplary cases of use)	Mean	SD
Creative Commons (CC)	1.63	1.09
Public Domain	3.71	1.46
Copyright (All Rights Reserved)	3.77	1.36

Interview findings showed parallel results with the survey findings related to CC licensing. None of the interviewees had knowledge of CC. More importantly, interviewees thought that licensed educational materials always required a fee to be used and they cannot be published freely. One participant, Selin, explained her idea about license mechanisms as follows:

Licensing allows people to use a material who paid licensing fee, so the material will not be open to use for others. When I hear the term licensing, the first thing pops in my mind is the material license fee.

Research Question 2: What do teachers perceive as the benefits of open educational resources for teaching purposes?

Seven five-point Likert-scale items (1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree) were included in the survey to measure teachers' perceptions of the potential benefits of OER. Survey results (*M = 4.01, SD = 0.86*) revealed that the use of OER is believed to lead to improvement in student performance. This perceived benefit is followed by the use of OER as potentially leading to improvement in student satisfaction (*M = 3.92, M = 0.77*). Mean scores and standard deviations for the items related to benefits are presented in Table 6 in ascending order by means.

In the interviews, teachers mostly underlined the easy-access feature of OER. It was found that the no-charge aspect and distribution of materials via the Internet has a huge influence on obtaining the desired materials. For instance, one participant, Cenk, asserted that, "Being able to access OER from anywhere at any time is a major feature I believe." Another participant, Gonca, indicated that, "Easy access and free of charge are the positive sides of OER. Also, allowing others to update and

repurpose the material can help its users to adapt and localize the material based on students' needs."

Table 5: Perceived Benefits

Items (Likert Scale: 1 = Strongly Disagree to 5 = Strongly Agree)	Mean	SD
Use of OER is an effective method for improving retention for at-risk students	3.56	.91
OER adoption at an institutional level leads to financial benefitsfor schools	3.58	.98
OER promotes more equitable access to education, serving a broader base of learners than traditional resources	3.64	1.01
OER adoption at an institutional level leads to financial benefits for students	3.68	.91
The open aspect of OER creates different adoption patterns than other online resources	3.68	.82
Use of OER leads to improvement in student satisfaction	3.92	.77
Use of OER leads to improvement in student performance	4.01	.86

In regards to the improvement in student performance, participants believed that OER use can be effective in meeting students' learning needs. Selin noted that "OER can better support contemporary learning styles and strategies." Another participant, Hakan, has used Khan Academy videos for six years in his classes. He reported, "Khan Academy contains educational videos that are of high quality in terms of the video content. Additionally, students are not suggested with absurd videos as opposed to YouTube."

Research Question 3: What do teachers perceive as the deterrents of open educational resources for teaching purposes?

In order to specify the challenges and obstacles in adopting OER, teachers were given 14 potential deterrents in the survey and asked to select the three most critical factors discouraging OER use in their courses. A distinctive pattern was identified based on frequency ranges between deterrents, which resulted in three distinctive groupings: (1) a high group with high frequencies, (2) a middle group with moderate frequencies, and (3) a low group with low frequencies.

In the high group, the frequency range was between 41 and 48. Two deterrents, namely, that it takes too much time to search, select, edit, and apply OER and the lack of knowledge on which materials are considered OER, were in the high group. While time concern was chosen 48 times (16.2%), uncertainty about which materials were OER was selected 41 times (13.8%) by the 99 survey respondents.

In the middle group, there were four deterrents: (1) lack of support from my school; (2) not enough resources for my subject; (3) not knowing if I have permission to use or change the resource; and (4) not current or up-to-date. These four items had a frequency range between 29 (9.8%) and 25 (8.4%).

Finally, the last eight items with low frequencies constituted the low deterrents group. Frequencies for the deterrents are presented in Table 6 in ascending order by frequencies.

In the interviews, the time required for creating new educational materials or revising pre-existing ones was found to be among the major challenges of the OER movement. For instance, one participant, Gonca, offered her opinion on required time by noting that "required time for creating a new material discourages me to produce materials."

Table 6: Perceived Deterrents

	f	%
Too difficult to use	6	2.0
Not effective at improving student performance	11	3.7
Too difficult to integrate into technology I use	12	4.0
Not high quality	13	4.4
Too hard to edit or modify	14	4.7
Not relevant to my local context	15	5.1
Not current, up-to-date	16	5.4
Not used by other colleagues I know	16	5.4
Not knowing If I have permission to use or change	25	8.4
Not enough resources for my subject	25	8.4
Lack of support from my school	26	8.8
Too hard to find what I need	29	9.8
Not clear about which materials are considered OER	41	13.8
Takes too much time to search, select, edit and apply	48	16.2
Total	297	100.0

Discussion

When survey and interview results of the current study were interpreted together, a misunderstanding of teachers between e-content available on the Internet and OER was determined. One major difference between the two is a licensing mechanism that is highly unknown to the study participants. Promoting the Turkish CC website accessible at http://creativecommons.org.tr can help eliminate unawareness of OER licensing among teachers. Insufficient professional development opportunities regarding the OER movement might impede teachers from developing the needed literacies and skills needed to contribute to the movement (Rheingold, 2010; Veletsianos & Kimmons, 2012).

In this study, helping to lead to improvement in student performance and improving student satisfaction were identified as the two major perceived benefits of OER for teaching practices. Simply put, there was widespread acceptance that OER is effective at improving student performance. However, misunderstandings of teachers related to what qualifies as OER might have played a role in such highly positive perceptions. In other words, educational material might be considered OER even if it is not because of teachers' confusion.

More problematic is that the required time for searching, selecting, editing, and applying OER was perceived as the greatest challenge in OER utilization. For example, after subjecting OER to a quality assurance process, the Commonwealth of Learning (COL) gathered various quality assurance items under different categories as a means to facilitate finding and selecting proper OER that allowed OER users to save time (Mishra & Kanwar, 2015). However, there is no universally accepted or established strategy or framework to subject an OER to a quality test (Emerson, 2013).

Finally, the current study found that teachers did not perceive quality of the OER as among the leading challenges. It is possible that the resources might be modified and translated into versions of high quality OER (e.g., MIT OpenCourseWare materials). On the other hand, it is commonly stated in the literature that quality assurance of OER is not an easy process. Mishra and Kanwar (2015) indicated that since openness can allow any user to modify the content, a big question mark emerges in regards to the question of, "Who is responsible for the repurposed content?" (p. 121). Furthermore, Wiley and Gurrel (2009) claimed that many people generally tend to believe that "free educational resources must necessarily be of poor quality" (p. 19). Today, enormous effort is spent on ensuring high quality for the OER through developing guidelines and establishing quality assurance institutions (Kawachi, 2014; Mishra & Kanwar, 2015); however, as stated earlier, there are no globally recognized standards for developing high-quality OER (Emerson, 2013).

Limitations

There were several limitations within this study. For instance, self-selection bias might be observed in recruiting the participants of this study due to the use of the email list from the TA. Another limitation related to the small number of interviewees. Conducting interviews with more than six participants might have been more helpful for researchers to build a deeper understanding of teachers' perspectives regarding the OER movement. Third, this study relied on instruments originally employed in the United States (Allen & Seaman, 2014). There may have been several important OER issues specific to educational environments in Turkey that did not arise due to reliance on such measures. Finally, the survey and interview responses are self-reported and may not match actual use and effectiveness of OER. The study results, therefore, are reliant on the accuracy of the perceptions of those surveyed and interviewed.

Conclusions and Future Directions

The results of this particular study could inform educational authorities in different countries--especially the Turkish Ministry of Education (MEB)--of the prevailing perceptions of teachers related to OER. With such awareness, various units within the MEB can take the findings of this study into account while forming OER policies and procedures. If effectively designed, such policies could increase OER awareness and knowledge among educational communities. Composing OER policy could also guide OER advocates to address critical OER development and use processes.

With the various results of this study, professional development specialists and potential OER repository developers, such as instructional designers, could be provided with valuable information in regards to the current knowledge of teachers related to open education and OER, in particular. The OER movement is not a common element of today's professional development activities around the

world (Veletsianos & Kimmons, 2012). Therefore, professional development specialists might use results of this study to contribute to the expansion of the OER movement and address the misunderstandings of teachers regarding OER.

OER supporters could take a role in organizing summits, conferences, or professional meetings that might focus on overcoming the various challenges brought about by OER. Such events could also serve to improve OER awareness in educational communities. Naturally, discovering strategies for promoting the OER movement could result in producing useful OER materials and integrating them into classrooms for effective learning. In addition, academics within or beyond Turkey who conduct OER research might become better informed about possible research needs and better supported in their efforts to explore such gaps.

Future research might attempt to extend these findings to other countries or regions of the world. As part of such expansion, OER researchers might also explore how OER practices of teachers in the developing parts of the world could better inform and engage those in the developed world. Instructional resources and activities designed in the developing world might be translated and localized for others. In an age of declining school funding and increased needs for education, teacher awareness, understanding, and adoption of OER is vital. Perhaps training programmes and modules could be designed, at least in part, based on the findings of the present study. When effectively deployed and integrated, OER has the potential to place a heavy footprint in real-world settings across educational sectors, ages, and grade levels. This particular study of Turkish teachers and classrooms is just the first step. No matter what country you are from, we encourage you to join the movement as well as help push it ahead.

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