

The Use of Open Educational Resources as Teaching Tools in Primary Education: Activities by Postgraduate Students of the Hellenic Open University

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Abstract

This paper attempts to explore the views of postgraduate students of the Hellenic Open University on the use of Open Educational Resources (OER) as teaching tools in teaching and learning for primary school students and more specifically the potential and limitations of OER. In this context, the research sample consisted of twenty-six (26) postgraduate students of the Hellenic Open University, who simultaneously worked as teachers in various Primary Schools in Greece. The sampling method followed was “convenience sampling”. The research tool for data collection was the use of an appropriately designed anonymous questionnaire in the form of a written questionnaire. It contained two open-ended questions which were considered - for the purposes of the research - as a questionnaire in the form of an open-ended structured interview. From the analysis and processing of the research data, the main conclusions are: i) the main potentials of OER as teaching tools recorded by the research subjects are open and easy access to information and virtual environments, reuse and continuous adaptation, modernization and innovation, variety and different forms of OER, saving financial resources, saving time for the teacher, etc. ii) the main constraints are the difficulty of quality control of OER, copyright restrictions, the lack of pedagogical and teaching criteria, the lack of logistical infrastructure, the need for internet access, the amount of time the teacher has to spend to identify them, the lack of knowledge and training on OER, the difficulty of finding OER relevant to the subjects, the lack of accessibility tools for students with special educational needs.

Keywords: Open educational resources, teaching tools, primary education, postgraduate students, Greek teachers

1. Introduction

Open Educational Resources (OER) are a relatively recently emerging concept in education at the international level (Adedoyin & Altinay, 2023; Admiraal, 2022; Allman et al., 2023; Bliss & Smith, 2017; COL, 2017; Santos - Hermosa et al., 2017; Koutsileou & Mitrou, 2017; Stavrianakou, 2022; Troussas et al., 2021; Xie et al., 2018). The concept of OER first appears in 2002 at the UNESCO meeting (UNESCO, 2002; Jhangiani & Biswas - Diener, 2017) on Open Courses and is found to be updated at the UNESCO General Conference in November 2019 (Adedoyin & Altinay, 2023; Bećirović, 2023; Huang et al., 2020; Stavrianakou, 2022; UNESCO, 2019). Current European Union education policies focus on the development of open education and the promotion of OER and e-learning at all levels and forms of education (European Commission, 2019; Inamorato et al., 2017; Jimoyiannis, 2019, 2020).

In this context, in recent years, organisations (Unesco, Organization for Economic Co-operation and Development (OECD), etc.), institutions (universities, colleges, etc.) and individuals have been involved in the promotion, dissemination and use of OER (Allman et al., 2023; Armakolas et al., 2017; Bećirović, 2023; Koutsileou & Mitrou, 2017; Mishra, 2017; Ossiannilsson et al., 2020; Rodrigues & de Oliveira, 2023; Stavrianakou, 2022; Zaidi et al., 2022). OER are collected and stored in databases called “Repositories” and developed by Universities, Institutes, institutions and professional bodies. In Repositories, OER are categorised by subject, level/grade, format so that they are easily searchable and accessible by various search criteria and described by a set of metadata (Lionarakis et al., 2020, p.9). In other words, the organization of OER in digital Repositories facilitates their efficient retrieval, open access and availability by teachers and students (Papadimitriou, 2022). As an extension of this, OER Repositories are a highly promising service through which OER educational materials can be shared easily and efficiently. Significant efforts have been made both in Greece with well-known Repositories, such as “Photodentro”, “Aesop”, etc. and internationally, such as “Scientix”, “Lams”, “Khan Academy”, etc. (Dragos & Papadakis, 2017; Megalou & Kaklamanis, 2014).

OER constitute a category of learning resources, mainly in digital form but also in print, that are freely, openly and legally offered to teachers, students and pupils for use, reuse or adaptation for the purpose of learning, teaching and research (Allman et al., 2023; Bello & Mohammed, 2023; Butcher, 2011; Kanwar & Uvalic'-Trumbic, 2011; Lionarakis et al., 2020; Misra, 2013; Papadimitriou, 2022; Smith & Lee, 2016; Tang, 2020; UNESCO, 2002, 2012; William & Flora Hewlett Foundation, 2019). More specifically, OER can, among others, be related to the following categories: e-learning platforms, e-books, open textbooks, whole courses or modules, teaching scenarios, Open Access journal articles, lectures, videos, lesson plans, images, interactive games, quizzes, guides, learning tools, software tools, virtual labs, podcasts, graphical visual representations of information (infographics), virtual and augmented reality applications, mobile technologies, etc. (Allman et al, 2023; Ioakeimidou, 2018; Koutsileou & Mitrou, 2017; Misra, 2013; Ossiannilsson & Creelman, 2012; Ossiannilsson et al., 2020; Papadimitriou & Lionarakis, 2013; Papadimitriou, 2022; Rodrigues & de Oliveira, 2023; Stavrianakou, 2022; Xie et al., 2018).

The use of OER offers potential for both improving the quality of education and facilitating a dialogue on education policy, knowledge dissemination and capacity building (Admiraal, 2022; Papadimitriou, 2022). OER are proposed to be systematically used in e-learning programmes delivered through distance or blended learning, as well as in face-to-face teaching (Jimoyiannis, 2020). In this context, the potential of OER are diverse, such as:

- focus on the production, licensing, use, reuse of learning resources and their accessibility from open access publications as public goods, thus helping both educators and learners (Bello & Mohammed, 2023; Blomgren, 2018; Papadimitriou, 2022; Rodrigues & de Oliveira, 2023; Tang, 2020; Tang et al., 2021).
- arouse students' interest in learning and actively engage them (Blomgren, 2018; Chen, 2020; Koutsileou & Mitrou, 2017; Lo et al., 2022; Stavrianakou, 2022; Tang & Bao, 2020)
- by managing OER in a legal operational framework - such as Creative Commons - the copyright of authors is secured and commercial exploitation of resources is limited (Huang et al., 2020; Ioakeimidou, 2018)
- minimize or eliminate the exorbitant financial costs of some books and educational materials that are borne by students, thus saving financial resources (Allman et al., 2023; Bello & Mohammed, 2023; Butcher & Hoosen, 2014; Hilton et al., 2013; Lo et al., 2022; Papadimitriou & Lionarakis, 2013; Rodrigues & de Oliveira, 2023; Wiley & Hilton, 2018; Zaidi et al., 2022)
- teachers save time since they use ready-made teaching materials, thus reducing preparation time and focusing on teaching and learning (Bossu et al., 2012; Rodrigues & de Oliveira, 2023; Tano, 2019; Zaidi et al., 2022)
- open access will allow the use of the material offered in a variety of ways, encouraging its wider use, while at the same time contributing to the creation of similar material so that other stakeholders can access it (Allman et al., 2023; Butcher & Hoosen, 2014; Ioakeimidou, 2018).
- enrich the educational material with a variety of educational resources in addition to textbooks, such as online tutorials, supplementary videos, booklets and interactive exercises, in order to enhance the learning and teaching process (Admiraal, 2022; Blomgren, 2018; Karunanayaka et al., 2015; Stavrianakou, 2022; Xie et al., 2018; UNESCO, 2019; Zaidi et al., 2022)
- make it possible to modernise and update the content of the courses through the addition of examples from everyday life and current events (Koutsileou & Mitrou, 2017; Papadimitriou & Lionarakis, 2013; Schuwer & Janssen, 2018; Stavrianakou, 2022; Wright & Reju, 2012; Zaidi et al., 2022)
- reinforce in students and teachers the educational values of disposition and collaborative knowledge creation (Arnakolas et al., 2017; Ischinger, 2007; Karunanayaka et al., 2015; Papadimitriou & Lionarakis, 2013)

- help teachers to adapt and improve educational materials for different educational needs (Admiraal, 2022; Krouska et al., 2020; Troussas et al., 2020; Rodrigues & de Oliveira, 2023; Tang & Bao, 2020; Zaidi et al., 2022)
- remove barriers to knowledge and provide equitable access to education, shaping a quality, equitable and inclusive education, thus contributing to the development of inclusive societies (Aparisi et al., 2021; Lo et al., 2022; Papadimitriou & Lionarakis, 2013; Rodrigues & de Oliveira, 2023; Zaidi et al., 2022)

However, although OER have a lot of potential, there are also several limitations regarding their use in teaching. In particular:

- intellectual property issues, copyright issues (Huang et al., 2020; Hylén et al., 2021; Ioakeimidou, 2018; Konkol et al., 2021; Lo et al., 2022; Papadimitriou & Lionarakis, 2013; Pounds & Bostock, 2019)
- scepticism about their controversial, in some cases, quality, which may be low (Admiraal, 2022; Clements & Pawlowski, 2012; Huang et al., 2020; Ioakeimidou, 2018; Lladós - Masllorens et al., 2017; Lo et al., 2022; Papadimitriou & Lionarakis, 2013; Pounds & Bostock, 2019; Zaidi et al., 2022)
- insufficient attention has been paid to improving and promoting them through specific policy decisions by countries, organisations, etc. (Andrade et al., 2011; Chen, 2020; Mtebe & Raisamo, 2014)
- levels of OER uptake remain low, especially in primary education, resulting in a lack of policy development and sustainable models of OER-related utilisation (Lo et al., 2022; Tang et al., 2021)
- a lot of time (time-consuming process) is required to search, select and process OER so that they can be used in teaching and learning (Admiraal, 2022; Christoforidou & Georgiadou, 2021; Hassall & Lewis, 2017; Lo et al., 2022; Stavriananakou, 2022; Sawyer & Myers, 2018; Tang et al., 2021; Zaidi et al., 2022)
- lack of technological infrastructure - such as availability of computers, low broadband connectivity, etc. - for both students and teachers (Bansal & Joshi, 2015; King et al., 2018; Konkol et al., 2021; Lo et al., 2022; Tanou, 2019; Tlili et al., 2019; Zaidi et al., 2022)
- the lack of training, sufficient technological skills, willingness and pedagogical knowledge of teachers regarding the value, use, production or integration of OER in teaching (Hassall & Lewis, 2017; Mtebe & Raisamo, 2014; Pirkkalainen et al., 2015; Schuwer & Janssen, 2018; Lo et al., 2022; Tang & Bao, 2020; Tlili et al., 2019; Zaidi et al., 2022)
- the insufficient additional pedagogical value and questionable quality of OER content (Admiraal, 2022; Abramovich & McBride, 2018; Lladós - Masllorens et al., 2017; Lo et al., 2022; Luo et al., 2020; Mishra et al., 2017; Tlili et al., 2019)

- fear by teachers of losing control of the learning process (Nascimbeni & Burgos, 2016; Tanou, 2019)
- lack of information for teachers. For example, many teachers are not aware of OER and especially open content licenses such as Creative Commons (CC) licenses (Admiraal, 2022; Bansal & Joshi, 2015; Belikov & Bodily, 2016; Hu et al., 2015; Zervou & Sofos, 2017; Stavriananakou, 2022; Rodrigues & de Oliveira, 2023; Zaidi et al., 2022)
- the difficulty for teachers to find up-to-date and thematically relevant OER with the subject matter of teaching (Admiraal, 2022; Beaven, 2018; Christoforidou & Georgiadou, 2021; Hassall & Lewis, 2017; Koutsileou & Mitrou, 2017; Lo et al., 2022; Luo et al., 2020; Stavriananakou, 2022; Tanou, 2019; Weller et al., 2014).

At the same time, both in Greece and globally, there is a growing interest in the use of OER in e-learning and in the usual educational practices in schools and higher education institutions. Not only students benefit from the integration of OER in teaching and learning, but also teachers (Allman et al., 2023; Tang, 2020). The study of students' and teachers' use of OER and their integration into the practice of the modern classroom is a timely, original and open research problem (Allman et al., 2023; Bello & Mohammed, 2023; Henderson & Ostaszewski, 2018; Lo et al., 2022; Luo et al., 2020; Rodrigues & de Oliveira, 2023; Zaidi et al., 2022).

This paper attempts to study the way in which graduate students of the Hellenic Open University (HOU) use OER as teaching tools during teaching and learning with Primary School students.

2. Method

2.1 Aim of the Research

The main aim of this research is to explore the views of postgraduate students of the HOU on the use of OER as teaching tools in teaching and learning for primary school students.

2.2 Research Questions

The research questions of this paper are:

1st research question: what are the potential of OER as teaching tools in teaching and learning for primary school students?

2nd Research question: what are the limitations of OER as teaching tools in teaching and learning for primary school students?

2.3 Sample of the Research

This research was conducted during the winter semester, in November 2022, in the context of a written thesis by graduate students of the HOU, who were simultaneously teaching as teachers in various primary schools in Greece.

The sample of the research was 26 postgraduate students of the HOU who were studying in the Postgraduate Programme of Studies: “Education and Technologies in Distance Teaching and Learning Systems - Education Sciences” and more specifically in the Thematic Unit: EDF62 entitled: “Digital Media in Education and Communication”.

The sampling method followed for the selection of the sample is ‘convenience’ sampling. More specifically, the researcher because he was teaching as a professor - counselor at the HOU focused on a specific student group since there was already a constant communication between the students and the researcher about the subject of their studies.

2.4 Research Data Collection Tool

As a research tool for data collection, an appropriately designed anonymous questionnaire in the form of a written assignment was chosen, which included two main open-ended questions in order to explore the views and thinking of postgraduate students on the use of OER as teaching tools in Primary Education. More specifically, the written assignment formulated: “Based on your teaching experience in primary schools, briefly describe: 1) what do you consider to be the potential of using OER as teaching resources in teaching and learning for primary school students? 2) what do you consider to be the limitations of the use of OER as teaching and learning tools for teaching and learning for primary school pupils? “.

2.5 Data Collection and Analysis

Data collection was carried out using the HOU’s synchronous and asynchronous tele-education platform. The research data were the written assignments of the postgraduate students and were considered as questionnaires in the form of an open-ended structured interview (Evangelou, 2023) for the purpose of the research.

The method for the data analysis was based on the qualitative approach, particularly content analysis (Berg, 1998; Creswell, 2014). This approach contributes to a systematic description of the content of written and spoken human communication (Berg, 1998). Through this approach, the researcher studied all the data collected several times in order to form an overall understanding about the views of the research subjects. Then, the content of the written assignments was sorted into appropriate categories so that it could be described in a systematic way (Evangelou, 2023). In this way, the data was coded based on the answers given to the two research questions. Each informant (postgraduate student) was assigned a code - from S1 to S26 - keeping this code throughout the survey, where S = student (postgraduate).

2.6 Limitations of the Research

This research has serious limitations, the most important being the small sample size. A convenience sample doesn’t provide a representative result. So, we cannot extract any generalities from the specificities given with an answer. Also, a questionnaire cannot fully capture emotional responses or feelings of respondents. At the same time, in open-ended questions it is difficult to analyze and interpret all the data. In conclusion, it is worth noting that content analysis is a time-consuming process.

3. Results

The categories of analysis - in conjunction with the research questions - that emerged from the clustering of the similar views expressed by the graduate students in the sample are:

- potential of OER
- limitations of OER

The potentials and limitations for the use of OER as teaching tools in primary education, based on the views of the research subjects, are recorded in Tables (1) and (2). On the left side of each table each category is recorded, on the right side - in two columns (frequency and percentage) - the number of research subjects who included in their work each individual possibility and limitation of OER is recorded.

Table 1. Response coding of the variable – question (1): potential

Category of answer to question (1)	Frequency (N)	Percent (%)
Open, free and easy access to information and virtual environments for teachers and students	18	69%
Modernisation and innovation in teaching	14	54%
Sharing best teaching practices, thus promoting collaboration and improving the quality of education	13	50%
Reuse and continuous adaptation	11	42%
Variety and different forms of OER, such as videos, podcasts, simulations, images, etc.	9	35%
Saving of financial resources: they are offered free of charge or at minimal cost, making the educational material affordable	8	31%
Reducing workload and saving time for the teacher by using ready-made educational material	8	31%
Promoting science and research in the wider society	7	27%
Generating interest and active involvement of students	7	27%

From the responses of the research subjects, 9 potentials emerge (Table 1). In particular, 18 out of 26 postgraduate students (69%) mentioned open, free and easy access to information and virtual environments for teachers and students as a possibility, 14 out of 26 (54%) mentioned modernization and innovation in teaching, 13 out of 26 (50%) mentioned sharing best teaching practices resulting in promoting collaboration and improving the quality of

education, 11 out of 26 (42%) mentioned reuse and continuous adaptation, 9 out of 26 (35%) mentioned variety and different forms of OER, such as videos, podcasts, simulations, images, etc., 8 out of 26 (31%) mentioned financial savings (offered for free or at minimal cost), 8 out of 26 (31%) mentioned reducing workload and saving time for the teacher by using ready-made educational materials, 7 out of 26 (27%) mentioned promoting science and research to the wider society, 7 out of 26 (27%) mentioned stimulating interest and active involvement of students.

Table 2. Response coding of the variable – question (2): limitations

Category of answer to question (2)	Frequency (N)	Percent (%)
Difficulty of quality control due to the abundance of OER. OER of poor quality are often identified	14	54%
Openness restrictions (e.g. rights, time), restrictions from copyright licences (Creative Commons)	11	42%
Do not meet pedagogical and teaching criteria	10	38,5%
Lack of logistical infrastructure and technical difficulties. Internet access required	8	31%
It takes a lot of time for the teacher to identify and exploit them	8	31%
Lack of knowledge and training on OER	8	31%
Lack of familiarity with ICT, lack of digital skills of both teachers and students	6	23%
The difficulty of finding OER that are relevant to subject areas	5	19%
Do not meet accessibility requirements, in several cases, for pupils with special educational needs	5	19%

Nine limitations emerge from the responses of the research subjects (Table 2). In particular, 14 out of 26 postgraduate students (54%) mentioned difficulty of quality control due to the abundance of OER as a limitation, 11 out of 26 postgraduate students (42%) mentioned openness limitations (e.g. rights, time) and limitations from copyright licenses (Creative Commons), 10 out of 26 postgraduate students (38.5%) reported that in several cases OER do not meet pedagogical and teaching criteria, 8 out of 26 postgraduate students (31%) mentioned the lack of logistical infrastructure, technical difficulties and the necessary access to the Internet, 8 out of 26 postgraduate students (31%) mentioned that it takes a lot of time for the teacher to identify and use them, 8 out of 26 postgraduate students (31%) reported a

lack of knowledge and training on OER, 6 out of 26 postgraduate students (23%) reported a lack of familiarity with ICT and a lack of digital skills by both teachers and students, 5 out of 26 postgraduate students (19%) reported difficulty in finding OER relevant to the subjects, 5 out of 26 postgraduate students (19%) reported that they do not meet accessibility requirements, in several cases, for students with special educational needs.

4. Discussion

From the processing and analysis of the above data, interesting data regarding the possibilities and limitations that arise from the use of OER as teaching tools in teaching and learning in primary education students.

More thoroughly, regarding the potential of OER, a very high percentage of postgraduate students (69%) stated as a key potential the open, free and easy access to information and virtual environments for teachers and students, which is found in several studies (Bello & Mohammed, 2023; Blomgren, 2018; Papadimitriou, 2022; Rodrigues & de Oliveira, 2023). Then, more than half of the graduate students (54%) reported modernization and innovation in teaching identified in similar studies (Koutsileou & Mitrou, 2017; Papadimitriou & Lionarakis, 2013; Schuwer & Janssen, 2018; Stavriananakou, 2022; Wright & Reju, 2012; Zaidi et al., 2022). Half (50%) stated that sharing of best teaching practices is achieved, thus promoting collaboration and improving the quality of education, a possibility identified in other research (Allman et al., 2023; Armakolas et al., 2017; Butcher & Hoosen, 2014; Ischinger, 2007; Ioakeimidou, 2018; Karunanayaka et al., 2015; Papadimitriou & Lionarakis, 2013).

A high priority (42%) of statements recorded reuse or adaptation for the purpose of learning, teaching and research (Allman et al., 2023; Bello & Mohammed, 2023; Lionarakis et al., 2020; Papadimitriou, 2022; Tang, 2020; William & Flora Hewlett Foundation, 2019). A relatively high percentage (35%) indicates the variety and different forms of OER, such as videos, podcasts, simulations, images, etc., a feature mentioned in other research (Admiraal, 2022; Karunanayaka et al., 2015; Stavriananakou, 2022; Xie et al., 2018; Zaidi et al., 2022). About one - third of respondents (31%) cite financial savings identified in recent research as potential (Allman et al., 2023; Bello & Mohammed, 2023; Lo et al., 2022; Rodrigues & de Oliveira, 2023; Zaidi et al., 2022), as well as workload reduction and teacher time savings identified in similar research (Bossu et al., 2012; Rodrigues & de Oliveira, 2023; Tanou, 2019; Zaidi et al., 2022). Finally, about a quarter of the respondents (27%) state as potentials the promotion of science and research in the wider society identified in related research (Aparisi et al, 2021; Lo et al., 2022; Rodrigues & de Oliveira, 2023; Zaidi et al., 2022), as well as the arousal of interest and active engagement of students found in other research (Blomgren, 2018; Chen, 2020; Koutsileou & Mitrou, 2017; Lo et al., 2022; Tang & Bao, 2020).

Regarding the limitations of OER, a high percentage (54%) stated the difficulty of quality control of OER as a primary limitation, a limitation mentioned in several studies (Admiraal, 2022; Huang et al., 2020; Lladós-Masllorens et al., 2017; Lo et al., 2022; Pounds & Bostock, 2019; Zaidi et al., 2022). Several postgraduate students (42%) reported limitations in terms of openness (e.g. rights, time) and copyright licenses (Creative Commons), which are found in

related research (Huang et al., 2020; Hylén et al., 2021; Konkol et al., 2021; Lo et al., 2022; Pounds & Bostock, 2019). A relatively high percentage (38.5%) of respondents reported a lack of pedagogical and teaching criteria identified in other research (Admiraal, 2022; Lo et al., 2022; Lo et al., 2022; Luo et al., 2020; Mishra et al., 2017; Tlili et al., 2019). About one third of respondents (31%) cite lack of logistical infrastructure and necessary internet access as constraints reported in related research (King et al., 2018; Konkol et al., 2021; Lo et al., 2022; Tlili et al., 2019; Zaidi et al., 2022), the time - consuming process that the teacher has to dedicate to identify them as shown in similar studies (Admiraal, 2022; Christoforidou & Georgiadou, 2021; Lo et al., 2022; Tang et al., 2021; Zaidi et al., 2022) as well as the lack of knowledge and training on OER (Admiraal, 2022; Bansal & Joshi, 2015; Belikov & Bodily, 2016; Hu et al., 2015; Rodrigues & de Oliveira, 2023; Zaidi et al., 2022).

Around a quarter of respondents (23%) report a lack of ICT familiarity and a lack of digital skills among both teachers and students, cited in relatively recent research (Schuwer & Janssen, 2018; Lo et al., 2022; Tang & Bao, 2020; Tlili et al., 2019; Zaidi et al., 2022). Finally, some respondents (19%) reported as a limitation the difficulty of finding OER that are relevant to the subjects identified in similar research (Admiraal, 2022; Christoforidou & Georgiadou, 2021; Lo et al., 2022; Luo et al., 2020), as well as not meeting accessibility requirements for students with special educational needs. The latter limitation has an additional value because it has not been identified during the literature review.

5. Conclusions

In this paper, based on the views of postgraduate students on the use of OER as teaching tools in the teaching and learning process, interesting findings regarding the potential and limitations of OER emerge. Characteristically, OER provide a viable solution for teachers and students to address the challenges of access, quality and cost of educational materials, as well as respond to the growing need of teachers in primary education for a variety of educational resources beyond textbooks and standard teaching practice to support teaching and learning. However, when using them, several limitations are also identified, such as the difficulty of quality control of OER, the necessary access to the internet, the time-consuming process that teachers have to dedicate to identify them, the lack of knowledge and training about OER, the difficulty of finding OER, the lack of accessibility tools for students with special educational needs.

Both from the findings of the present research and the literature review, it is clear that the use of OER by students and teachers and their integration into the practice of the modern classroom is a topical and original research problem. In order to achieve the universal and effective utilization of OER in everyday educational practice in primary education, the following interventions should be made:

- effective strategies to enhance teachers' intention to adopt OER, which is achievable through the integration of OER into primary education curricula, the development of communities of practice and the creation of networks of OER experts (Tang et al., 2021; UNESCO, 2019).

- training of teachers on OER. For example, training on how to search, find and qualitatively evaluate OER, as well as on digital skills and practices regarding the creation and use of OER in teaching and learning (Tanou, 2019)
- proper planning - with clear pedagogical and instructional criteria - for the production and creation of OER as teaching materials by both teachers and relevant institutions, such as the Ministry of Education, institutes, universities, etc. (Luo et al., 2020)
- the creation and continuous updating of a centralized Digital Repository, which will host high-quality educational materials and promote collaboration and interaction. Typical Repositories known in Greece are “Photodentro”, “Aesop” and internationally “Scientix”, “Lams”, “Khan Academy”, etc. (Dragos & Papadakis, 2017; Megalou & Kaklamanis, 2014; Troussas et al., 2020).

In this context, the creation and use of OER in Primary Education as teaching tools should be considered an integral part of education and of course should be given high priority by the State, the Institutes of Educational Policy, universities and schools. In these ways, “openness” in education related to access and widening participation in education, open educational content, open pedagogical practices, collaboration and exchange of experiences between educational institutions, teachers and students is enhanced (Cai et al., 2023; Chen et al., 2022; Jimoyiannis, 2020).

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