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## Open Educational Resources for Language Education: Towards the development of an e-toolkit

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**Abstract.** The Open Educational Resources (OER) movement is overgrowing over the last 15 years, as many institutions adopt the idea of openness and universal access to educational content. Thus, the research and educational material must be open to everyone interested, including students, adult learners, teachers, professionals, managers, and policymakers. With this in mind, the creation and use of OER is a current educational practice for educators around the world. This manuscript aims to provide an overview of all the core elements for creating, using, and sharing quality multilingual and interactive OERs for Language Education. Specifically, the paper provides an extensive summary of existing language OERs and Open Educational Practices (OEPs), including some important definitions, highlighting the most significant characteristics and challenges in adopting OERs for educational purposes. This review will help language teachers, students, and researchers to create, share, and use quality multilingual and interactive OERs for language learning in their teaching practices.

**Keywords:** Language Education, Language Learning, OEP, OER, Open Education, OPENLang Network.

### 1 Introduction

The Open Educational Resources (OER), a term coined during a UNESCO Forum, refers to the openness and provision of different resources for educational purposes giving users free access to the educational material and resources to be used in various educational contexts. The OER concept is growing rapidly over the last 15 years, as distance education practices and online learning methodologies have been developed and implemented worldwide. Given that, many institutions adopt the idea of openness and universal access to educational content and provide freely an enormous number of resources to the public. Thus, a lot of educational material and resources are now open and available to everyone interested (i.e., students, adult learners, teachers, professionals, managers, policymakers, etc.) and also accessible for revision and adaptation to a specific context [1].

OERs are increasingly playing a critical role in distance/online learning systems in many countries. Distance learning methods have been facilitated by the available OER, as they offer enhanced access for groups customarily constrained from attending traditional institutions, such as secondary school graduates who fail to gain admission to a university, women with domestic responsibilities, learners residing in remote rural areas, and impoverished or socially marginalized communities [2].

Nowadays, although there are plenty of resources available on the web, it is sometimes difficult to find an adequate OER to use for specific purposes. This manuscript aims to provide a comprehensive overview of all the main aspects of the creation, use, and sharing of OER material for language learning and teaching. The overview will further develop our knowledge about OER and help us create an OER e-toolkit to be used by teachers, researchers, and students. This e-toolkit which is developed in the context of the European project “Open European Languages and Cultures Network”, covers the basic steps of finding, using and creating an OER for Language Education.

Furthermore, this e-Toolkit will help language teachers, researchers, and others in this field on creating, sharing and using quality multilingual and interactive OERs for language learning in their teaching practices. Also, many institutions and other stakeholders (e.g., Universities, Schools, Educational organisations, Businesses, etc.) would benefit from possibly adopting this e-Toolkit in their educational practices, promoting openness, multilingualism, collaboration, and quality among others.

In this paper, we first provide an overview of OER, highlighting the most significant characteristics of OER and focusing on benefits and challenges mentioned in the literature. Then, we present an overview of existing OER guidelines for creating/sharing/using language materials and language OER databases, based on the previous successful examples of OER guidelines. Finally, we provide some information regarding the development of the e-toolkit and conclude with some important considerations and future implications.

## **2 An Overview of Open Educational Resources**

### **2.1 Definitions**

The concept of OER was developed in 2002 during an online discussion hosted by UNESCO. OERs are defined “as ‘technology-enabled, open provision of educational resources for consultation, use, and adaptation by a community of users for non-commercial purposes” [3]. According to this definition, OERs refers to freely available digital resources and educational material to support the teachers and the students. These resources usually include learning objects, course materials, textbooks, experiments and demonstrations, and syllabuses, curricula, and teachers’ guides [3].

The Organization for Economic Co-operation and Development defined OER as: “digital learning resources offered online ...freely and openly to teachers, educators, students, and independent learners in order to be used, shared, combined, adapted, and expanded in teaching, learning and research” [4], [5]. In this context, OERs are teaching, and learning materials/ resources/ tools offered freely and openly to anyone and are available under a license that allows users to retain, reuse, revise, remix, and re-

distribute. The opportunity for remixing, reusing and redistributing OERs developed further the OERs' concept, as this opportunity allows teachers to share the resources with colleagues and students, edit and adjust the material based on their specific needs and local context. Each OER has a Creative Commons or GNU license that states specifically how the material may be used, reused, adapted, and shared.

In the literature, there are two different types of OERs: informal OERs (e.g., social media, mobile calling, texting) and formal OERs (e.g., classroom prescribed learning tools and lectures) on specific development outcomes of functional literacy and perceived employability [6]. Some digital learning contents can be accessed and used freely as OERs in the public domain or introduced with an open license which means that anyone can legally and freely copy, use, adapt, and re-share them [7]. According to many scholars/ authors Massive Open Online Courses (MOOCs) are a special case of OERs [8]; others believe MOOCs to be a progressive step in the evolution of OER [9]. In the last decade, the European Union has intensified the promotion of OERs since they can facilitate policy dialogue, knowledge sharing, and collaboration between states and institutions internationally [10].

Sometimes, OERs are interconnected or combined with Open Educational Practices (OEP). According to Ehlers [11] OEP: "is the use of Open Educational Resources for teaching and learning to innovate the learning process". With this in mind, OEPs could be defined as some practices which promote and enhance the use and development of OER following some rules, policies or pedagogical models and frameworks. Specifically, the Open Educational Quality (OPAL) Initiative defines OEPs as: "the use of OER to raise the quality of education and training and innovate educational practices on an institutional, professional and individual level" [12].

In a nutshell, OERs are the educational material freely available on the web while an OEP is actually the implementation, reuse and adjustment of an existing OER. For example, according to Ehlers [11], the pure usage of OERs in a traditional closed and top-down learning environment is not OEP.

## 2.2 OERs' Principles and Characteristics

OERs' general characteristics and principles, based on the literature, include amongst others, the accessibility to everyone, the openness, the open license for the reusing and modification of the material, the easiness to adapt and adjust in any context and the inclusion of all types of digital media and multimedia applications [13]. Wiley and Green [14] state that OERs should promote the following "4R" activities:

1. Revising which is adapting the OER to meet the needs of the end-user,
2. Remixing – combining or "mashing up" the OER with another OER to produce new materials,
3. Reusing – using the original or derivative versions of the OER in a wide range of new contexts, and
4. Redistributing – sharing the original work or derivative versions with others.

There are numerous OERs examples and categories. Based on the functionality and usage of OERs, there are three major categories of OERs: Directories, Repositories

and Databases. Directories provide resources that are available elsewhere on the Web. Repositories are platforms that offer specific educational material or digital tools designed and developed in the context of OER. Databases are the collection of OER, usually ones created by a particular institution.

Some examples of OERs available to the Web include learning content (i.e., course materials, content modules, learning objects, videos, assignments, journals, etc.), interactive learning environments, digital tools (i.e., software for the creation, use, and improvement of open learning content), digital textbooks, lesson plans for all the educational levels, worksheets, adaptations of previously published OER.

In this context, Economides and Perifanou [15] proposed the OPEN FASUCICESA- CPT model defining the following Open Capabilities for an OER:

- Open to Find (Seek, Locate, Discover);
- Open to Access (View, Watch, Read, Listen, Hear);
- Open to Store (Save, Retain, Download, Copy, Duplicate, Print);
- Open to Use (Control, Manage, Select);
- Open to Create (Design, Develop, Produce, Construct, Build, Calculate, Solve, Modify, Alter, Change, Adapt, Revise, Translate, Mix, Integrate, Combine);
- Open to Interact (Communicate);
- Open to Collaborate (Cooperate, Co-Creat);
- Open to Evaluate (Assess, Review, Critique, Rank);
- Open to Share (Distribute, Teach, Publish, Display, Present, Present, Display, Show);
- Open to Abandon (Quit, Drop Out, Leave, Depart) without any penalties, charges, fines, obligations, punishments etc.;
- Open Cost (allow anyone to participate at no cost);
- Open Place (allow anyone to participate from anywhere).
- Open Time (allow anyone to participate anytime).

### 2.3 Benefits and Challenges in using OER in Education

OERs offer great opportunities for learners, students, teachers, and educational institutions as OERs give access to a plethora of resources and content. Nowadays, learning materials can be easily distributed, shared, and adapted to meet learners' needs and interests. There is evidence from the literature that there are some important benefits of using and sharing OERs.

First of all, OERs could increase learners' motivation and engagement [16]. Shmueli [16] claims that the use and sharing of OERs can enhance education and research, reduce the costs of educational resources' development by reusing existing resources, enhance the demand for life-long learning, and allow adjusting of existing educational materials for local needs. It is also argued that OERs create opportunities for more personalised learning experiences and increase students' engagement [17]. For example, OERs can engage and motivate students with different socio-cognitive backgrounds in the learning process [17]. Some studies revealed that OERs increase students' productivity by boosting their confidence, interest, and satisfaction while

other studies show that OERs' awareness is growing [18]. The use of OER is a way to enrich and enhance traditional course content in every subject and specifically in language learning. The conventional classroom can be enriched using OERs multimedia material, presenting information in multiple formats, and helping students earn the material being taught more easily. The digital resources (e.g., applications, tools, etc.) that OERs offer should be considered valuable OERs in language learning and teaching [19]. Indeed, OERs can facilitate the teaching based on some pedagogical approaches creating language awareness.

Furthermore, students anywhere in the world can access OERs at any time, and they can access the material repeatedly. This means that many people can benefit from the educational content, which is a good thing for both learners and teachers. In that way, OERs increase access to educational materials for a wider range of learners, predominantly those underserved by traditional educational opportunities. Also, OERs help teachers to expand their roles and find innovative ideas to implement in their classes [18], [20], support teaching and learning practices [21] and finally reduce costs for teachers and students during the course [22]. Also, previous studies [5], [23] claimed that teachers use OERs to enrich their teaching methods and practices as well as to interact with other colleagues [24]. According to [25], the use of OERs promotes innovation in teaching practice enriching the teaching methods, strategies and existing curriculum and content, increases educators' reflection on current practice, and creates opportunities for more collaborative methods of working [25].

Despite the benefits and advantages of using OER in educational contexts, several studies indicated some challenges and obstacles on the use of OERs. One big challenge is the lack of knowledge by educators regarding the usage of OERs, including issues of language, the lack of ICT skills, some materials are confined within the e-learning institutions, the limited free time and the lack of reward systems to account for the efforts invested in creating and using OERs [24], [26].

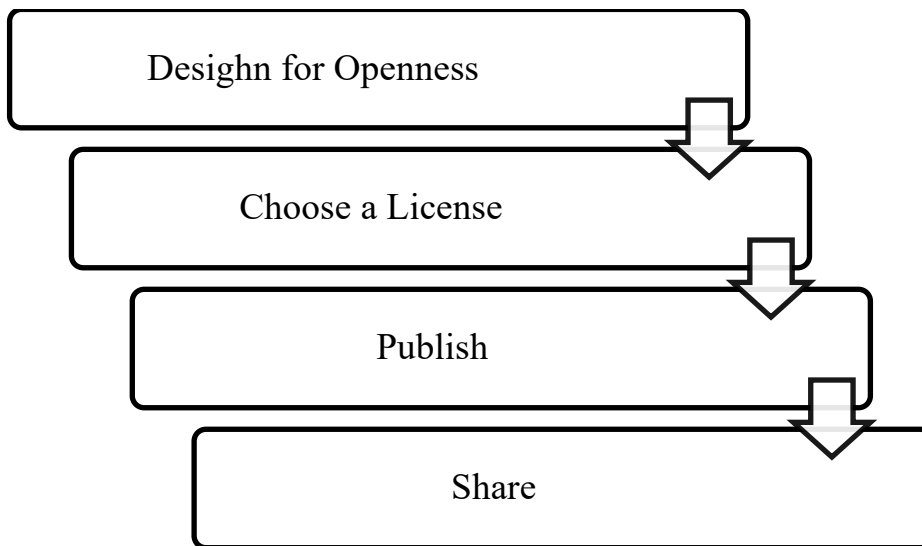
Even more, a lot of work should be done regarding disseminating OERs amongst the educational world to become more accessible to everyone. The use of OERs in the EU is still far behind other countries such as the USA except for the UK [10]. Given the teachers' limited knowledge, there is plenty of room for disseminating OERs that promote language learning experiences (1) geared towards a more integrated view of language learning skills and (2) favor more personalized learning experiences.

Hodgkinson-Williams [27] talking about the challenges and adaptation of using OERs, claims that the absence of students and learners' technical skills, the difficulties in covering the cost for developing or sustaining OERs, the unwillingness to share, use or give away intellectual property, the lack of incentives for the creation of OERs, and the difficulty to assure quality in open content are some of the basic challenges that researchers should be aware.

### 3 Use, create, and share of OER: Mapping the existing guidelines

Generally, there are numerous articles and reports which include guidelines in relation to OER. These guidelines were developed to help people interested in creating, using, and finding OER. Most of these guidelines are targeted to specific groups such as teachers, students, organisations, schools, etc. Some of these guidelines were created in the context of Erasmus+ projects to enhance or promote the use of OER for specific purposes. This section presents some important existing guidelines regarding the use, creation, and sharing of OER. It also provides some important considerations that could help us create step-by-step guidelines for Language Education.

According to the literature [13], there are some concrete steps for the OERs' creation and share, as figure 1 shows. The first step is the design and development of the OER. In this step, it is important to consider the copyright restrictions in order to provide as much openness as possible. The second step is the choice of a specific license, for example based on the popular Creative Commons framework. Attribution is always a requirement, and the author can decide whether or not to open the OER up to remixing and/or commercial use. The next step is the publication of the OER on the web and the final step is sharing the OER with others. In the final step, there are many available choices and ways to promote and disseminate the OER in many groups of people who might be interested in using this OER (i.e., social media, email, blogs, YouTube etc.).



**Fig. 1.** Concrete steps of the OER' creation

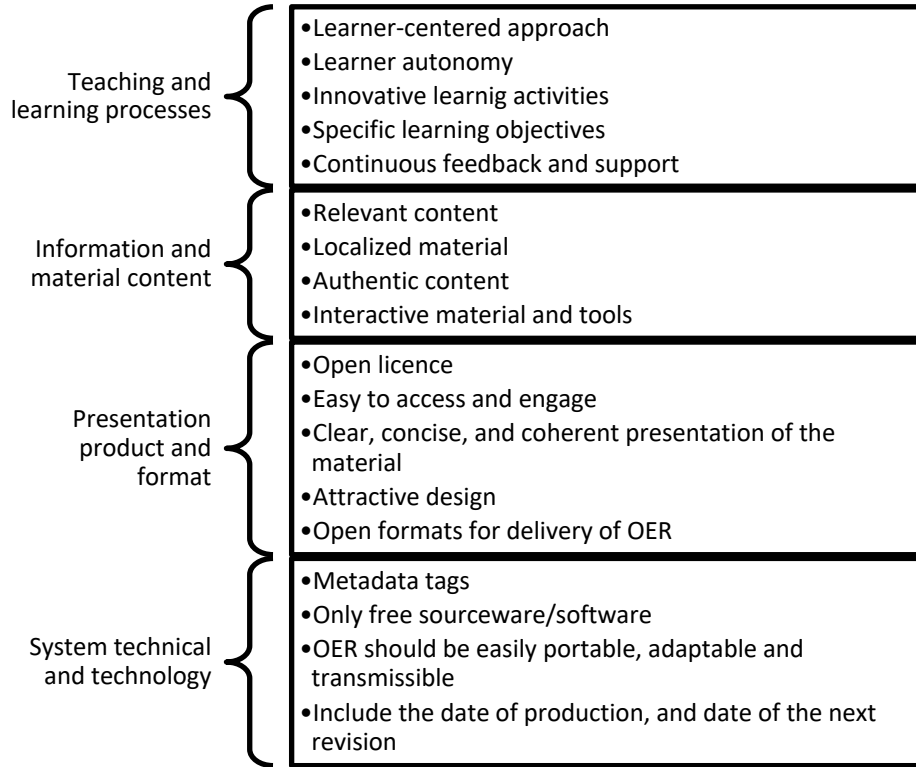
Regarding the development and sustainability of an OER, Wiley and Henson [23] proposed a model with seven phases/ steps as follows:

- Get: The first stage includes searching and finding OERs;
- Create: Generating the OER, preferably using open source tools;
- Localise: Making the OER more targeted to the specific group of people and to the particular context;
- Remix: Taking two OERs, editing and merging them to a new OER;
- Licensing: Choosing the appropriate license;
- Use: Implementing the OER in your context;
- Redistribute: Publishing the OER and making it available for a wider range of people and communities within the educational sector.

However, as many researchers stated, before finding, creating or remixing OERs you need to seriously consider the OERs' quality. Orr, Rimini and Van Damme [4] highlight some specific policy considerations and recommendations for supporting the use, sharing and adaptation of OER. According to them, for the creation of OERs, the main objectives should be to aligning the OER to key educational challenges, to ensure the sustainability of OER, to integrate OER into the whole learning setting, to support teachers and learners, to save costs, and to improve the quality of educational resources. Specifically, some of the OERs' policy actions that Orr, Rimini, and Van Damme [4] propose are the provision of open license materials, the establishment of new communities of practice within the education field, the promotion of new digital tools, and the promotion of research on how OERs are produced and used in certain contexts.

Several studies in the area of OER claim that OER can facilitate learning and lead to pedagogical change and more learner-centred experiences [18], [21], [25]. There are many examples and cases mentioned in the literature on integrating and using OER in the teaching practice to create more engaging and interactive lessons [25]. Some examples include the support of peer learning between learners using Khan Academy materials, the use of a digital course to support hybrid forms of teaching and learning, the use of a simulation to support problem-based learning, and Augmented Reality to present the learning resource etc.

In this context, Kawachi [28] developed the TIPS Framework consisting of four basic pillars: Teaching and learning process; Information and material content; Presentation product and format; System technical and technology. This framework includes some specific criteria mainly for teachers as creators of OER, as presented in figure 2. Each pillar provides some basic suggestions/ recommendations to be taken into consideration by teachers when creating an OER. The first pillar has to do with the teaching methodologies, processes and approaches, while the second pillar focuses on the content that is included in the OER. The third pillar refers to the presentation of the material focusing on formatting and designing, and the fourth pillar is about the technical part of the OER.



**Fig. 2.** TIPS Framework: teachers as creators of OERs [28]

Additionally, McGreal [29] indicates that the use of previously created materials is almost always more efficient than creating your own and recommends taking advantage of the online freely and legally accessible OER. The report also suggests that mixing and matching from different sources can be more effective than creating them from scratch. This also provides flexibility for reuse and repurposing. Similarly, Zimmermann [30] reports some general hints for creating OER highlighting the importance of copyright when using an existing available material by selecting the license carefully based on the OER's content and purpose. It is also important to think about how you would like to distribute your OER to maximize the number of people who can benefit from it. Regarding the sharing of an OER, Butcher [31] proposed four ways of sharing OER with others. The first way is to use the institutional repository. The second way is to select an open repository to share the OER and make it available to more people. The third way is to build the OER online since there are sites that encourage the development of OER within their online environments (e.g., Connexions, WikiEducator). The last way is to share the OER through social networks such as Twitter, Facebook, LinkedIn, etc.

Given the potential of OER to improve higher education systems, UNESCO and the Commonwealth of Learning (COL) have proposed some guidelines to support



governments, higher education institutions/providers, academic staff, student bodies, and quality assurance/accreditation and recognition bodies [32]. Below the specific guidelines for academic staff are presented:

- Develop skills to evaluate OER;
- Consider publishing OER: working collaboratively with peers and publishing materials openly that are already routinely produced as part of teaching and learning;
- Assemble, adapt, and contextualise existing OER;
- Develop the habit of working in teams;
- Seek institutional support for OER skills development;
- Leverage networks and communities of practice;
- Encourage student participation;
- Promote OER through publishing about OER;
- Provide feedback about, and data on the use of, existing OER;
- Update knowledge of IPR, copyright and privacy policies.

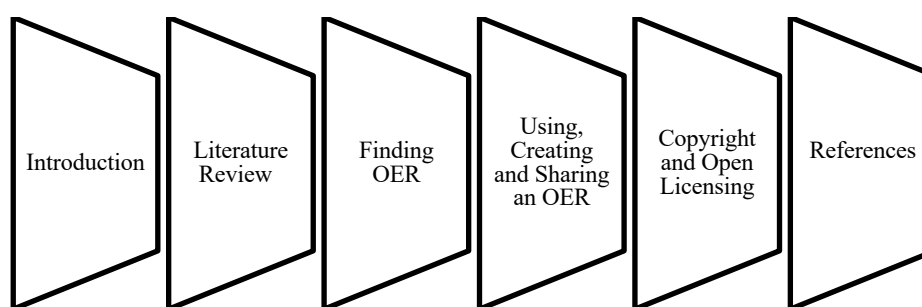
To conclude, there are plenty of open resources available on the web for educational usage in all educational institutions, from schools to universities. Based on the literature review and the findings from the online survey completed by Erasmus+ participants [33] will help us to create an e-toolkit for language education. In the next section, we provide some basic guidelines for the use, creation, and sharing of OER. We also present some well-known and successful databases with a focus on open resources for language learning and teaching. Language teachers and trainers can use those open resources to improve their existing teaching practices. These resources may allow them to adopt innovative strategies/ methodologies and bring technology to the classroom.

## 4 Towards the development of an OER e-toolkit for Language Education

As mentioned before, many previous reports offer comprehensive guidelines on how teachers can create, use, and share OERs. Taking in consideration the insights from those reports we developed an e-Toolkit for the creation/share/use of quality multilingual and interactive OERs for language learning. This e-toolkit has been developed with regards to the OPENLang Network project (<https://www.openlangnet.eu/>), an Erasmus+ KA2 project. It has a concrete structure, and it combines theory and practice. More specifically, the e-Toolkit includes:

- Useful material (basic authoring tools for the creation of OERs, language OER databases, etc.),
- Specific examples of OERs,
- Useful tips for the creation/ sharing of language OERs,
- Examples of good Open Educational practices in Language education,
- Self-evaluation assessment at the end of each section.

This toolkit is a step-by-step guide for Language education to equip language learning instructors and trainers with the skills they need to find, use, create, and share language OER. The e-toolkit is composed from six sections covering important aspects of working with OER, as figure 3 shows. Particularly, in the introduction part, the purpose of the e-toolkit is explained, the target group that the toolkit is designed for and some instructions on how to use the toolkit. The next chapter is the literature review where we provide some definitions of OERs and OEPs, some characteristics, categories, benefits, and challenges of using OERs and also an overview of existing guidelines for OERs. The rest of the e-toolkit focuses on finding, using, creating and sharing an OER. In these sections, we explain where and how to find language OERs and OEPs, how to create OER (basic authoring tools for the creation of OERs, language OERs databases). We provide specific examples of OERs and OEPs in Language education and offer useful tips for the creation and sharing of language OERs. Last, we provide some guidelines regarding copyright licensees. It is important to mention that each of the above sections/chapters include specific learning objectives and self-assessment quizzes at the end.



**Fig. 3.** Structure of the e-toolkit

The main purpose of this e-toolkit is to get language teachers and trainers involved in the adoption, creation, use, and sharing of OERs for language learning and teaching. The e-toolkit will help language teachers find, use, create, and share quality multilingual and interactive OERs for language learning in their teaching practices. All teachers/trainers/researchers of language education are expected to benefit from possibly adopting this e-toolkit in their educational practices.

#### **4.1 Finding OER related to Language Education**

In this section, some searching tips are presented for finding an OER in the area of language education. Also, some available repositories, best OEPs for Language Learning and resources are listed to help teachers and trainers find the appropriate OERs. This section's main learning objective is to provide some basic information on conducting a preliminary search for OER related to language education.

There is a growing interest in OER use in language learning contexts [19]. OERs is a powerful tool for language learning as they promote personalized learning experiences. There are many free textbooks available in many languages. There are also many repositories and databases in relation to language education. For example, there is a series of useful material to be used in foreign language teaching, in second language teaching, in Computer Assisted Language Learning etc. A list of useful OERs databases in language learning is presented in the following table 1.

**Table 1.** Some indicative OER databases for Language Education

a/a	OER for Language Education
1	Center for Open Educational Resources & Language Learning (COERLL)
2	OER Commons
3	IRIS
4	MERLOT
5	The CEELBAS Language Repository
6	AbulÉdu Data
7	OpenLearn

## 4.2 Using, Creating and Sharing OER

This section aims to provide useful information for language teachers and trainers on how a teacher can use an OER in the classroom, how to create and share an OER identifying the main steps and considerations of the OER creation process. Based on the previous research, some useful tips on how you can use OER in your classroom include:

- Find the most appropriate OER for your lessons.
- Integrate an OER into the whole learning setting.
- Use an OER in a collaborative way.
- Create spaces within the curriculum for this collaborative type of learning.
- Create new forms of learning within the OERs to provide learners with a learning experience that better facilitates personal development and success.
- Consider giving a study guide to your students on how to integrate the specific OER into the classroom.
- Use a learner-centred approach.
- The OER material that you use should align with local wants and needs and anticipate your students' current and future needs.

In terms of creating an OER, teachers/researchers/trainers should take into account some specific key considerations before starting the process of creating. The first thing is to identify who your audience will be (level of language, nationality, age, interests, etc.). A second important consideration has to do with the changes that need

to be done in the OER if this is an existing material and mainly which types or formats of OER will be used. Last, the third consideration is related to the design challenges that need to be under consideration (i.e., content, size, formatting, etc.).

In terms of sharing, which is the final stage, the necessary steps that a teacher should follow to share its own resource are:

- Use Creative Commons to find openly licensed content to remix;
- Choose a License;
- Assign a license to the OER;
- Demonstrate best practices in the attribution of authorship, for both the authors of the OER and for your own creations.

After that, one important step is the information about Copyright and Open Licensing. It is crucial for those who would like to create an OER to understand the copyright and open licenses, be aware of the different options that the Creative Commons License framework provides, and choose the appropriate license based on the content and learners' needs.

At the end of each section, one self-assessment quiz is provided (see figure 4). This is a simple test or quiz that includes some questions (e.g., true/false, multiple choice questions) and some practice exercises based on the specific content and information provided in the section. This test will help people to reflect on what they have learned and test their knowledge.

#### Quiz 5: Using, creating & sharing OER |

Please complete the following exercises. In multiple choices questions only one option is correct (solutions on Appendix I)

<b>Exercise 1: List five (5) key considerations of the OER creation process</b>
<b>Exercise 2: Considering the creation of an OER, one of the following advices is not appropriate</b>  A. Use authentic content B. Present your material <u>in a clear and concise way</u> C. <u>Don't</u> mention the purpose of the OER D. <u>Don't</u> use difficult language
<b>Exercise 3: List four (4) criteria teachers should consider when using an OER according to the TIPS Framework proposed by <u>Kawachi</u> (2014)</b>
<b>Practice exercise: Working with an OER</b>  <i>Task 1:</i> Use one existing material that it is useful for your lectures and try to design an OER using Canva ( <a href="https://www.canva.com/">https://www.canva.com/</a> ). <i>Task 2:</i> Share your OER with other colleagues via social networks. <i>Task 3:</i> Which aspects do you find easy, which are more difficult?

**Fig. 4.** An example of a self-evaluation assessment included in the e-toolkit

## 5 Conclusions

Based on our research, there are plenty of open resources available on the web for educational usage in most educational institutions, from schools to universities. In this paper we provided some important considerations regarding the creation, use, and sharing of OERs with a focus on open resources and practices for language learning and teaching. These OERs can be used by language teachers and trainers to improve their existing teaching practices. Usually, these OERs give them opportunities to adopt innovative strategies/methodologies and bring technology to the classroom. Finally, taking into account the insights from previous reports and studies, we developed an e-toolkit with step-by-step guidelines on how teachers/ researchers can create, use and share quality multilingual and interactive OER for language education.

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## References

1. McGreal, R.: Special report on the role of open educational resources in supporting the sustainable development goal 4: Quality education challenges and opportunities. The International Review of Research in Open and Distributed Learning, 18(7), (2017).
2. Saint, W.: Tertiary distance education and technology in Sub-Saharan Africa. African Higher Education: An International Reference Handbook, 5(1), 93-111, (2003).
3. Wiley, D.: Defining the "open" in open content and open educational resources. Open Content. Retrieved from <http://opencontent.org/definition/> (2014).
4. Orr, D., Rimini, M., Van Damme, D.: Open Educational Resources: A catalyst for innovation, Educational Research and Innovation, OECD Publishing, Paris. (2015), <http://dx.doi.org/10.1787/9789264247543-en>
5. Hylén, J.: Open educational resources: Opportunities and challenges. Proceedings of Open Education. Retrieved May 14, 2020, from [http://www.knowledgeall.com/files/Additional\\_Readings-Consolidated.pdf](http://www.knowledgeall.com/files/Additional_Readings-Consolidated.pdf)
6. Chib, A., Wardoyo, R. J.: Differential OER impacts of formal and informal ICTs: Employability of female migrant workers. International Review of Research in Open and Distance Learning. Athabasca University, 19(3), pp. 94-113, (2018). doi: 10.19173/irrodl.v19i3.3538.
7. United Nations Educational, Scientific and Cultural Organization: What are open educational resources (OERs)?, Paris: Unesco.org, (2012). Retrieved from <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/what-are-open-educational-resources-oers/>

8. Rhoads, R. A., Berdan, J., Toven-Lindsey, B.: The open courseware movement in higher education: Unmasking power and raising questions about the movement's democratic potential. *Educational Theory*, 63(1), 87–109, (2013). <http://doi.org/10.1111/edth.12011>
9. Boga, S., McGreal, R.: Introducing MOOCs to Africa: New economy skills for Africa program – ICT, (2014). Retrieved from <http://oasis.col.org/handle/11599/613>
10. Sabadie, J., Mu~noz, J., Punie, Y., Redecker, C., Vuorikari, R.: OER: A European policy perspective. *Journal of Interactive Media in Education*, 1–12, (2014). doi:<https://doi.org/10.5334/2014-05>
11. Ehlers, U.-D.: Extending the Territory: From Open Educational Resources to Open Educational Practices. *Journal of Open, Flexible and Distance Learning* 15(2), (2011).
12. Open Educational Quality (OPAL) Initiative. Retrieved from: <https://www.icde.org/open-educational-quality-initiative>
13. Camilleri, A. F, Ehlers, U.D, Pawlowski, J.: State of the Art Review of Quality Issues related to Open Educational Resources (OER), Luxembourg: Publications Office of the European Union, p. 54, (2014).
14. Wiley, D., Green, C.: Why openness in education? In D. Oblinger (Ed.), *Game changers: Education and information technologies* (pp. 81–89). Washington, DC: Educause, (2012). <https://library.educase.edu/resources/2012/5/chapter-6-why-openness-in-education>
15. Economides, A. A. & Perifanou, M.: Dimensions of Openness in MOOCs & OERs. In: *EDULEARN2018 Proceedings*, 10th International Conference on Education and New Learning Technologies, pp. 3684–3693. 2–4 July, Palma Spain, IATED Digital library, (2018). doi: 10.21125/edulearn.2018.0942
16. Shmueli, E.: MERLOT - A Reliable Framework for OER', in *Proceedings - International Computer Software and Applications Conference*. IEEE Computer Society, pp. 697–699, (2017). doi: 10.1109/COMPSAC.2017.280.
17. Mossley, D.: Open Educational Resources and Open Education. *The Higher Education Academy*, . ( 2013).Retrieved from: [http://dspace.vn/bitstream/11461/305/1/oer\\_toolkit\\_0.pdf](http://dspace.vn/bitstream/11461/305/1/oer_toolkit_0.pdf)
18. Farrow, R., Pitt, R., Delos-Arcos, B., Perryman, L., Weller, M., McAndrew, P.: Impact of OER use on teaching and learning: Data from OER Research Hub (2013–2014). *British Journal of Educational Technology*, 46,972–976, (2015). doi:<https://doi.org/10.1111/bjet.12310>
19. Thomas, M., Evans, M.: Guest editorial. *Computer Assisted Language Learning*, 27, 107–108, (2014). doi:<https://doi.org/10.1080/09588221.2014.874101>
20. Petrides, L., Jimes, C., Middleton-Detznr, C., Howell, H.: OER as a model for enhanced teaching and learning. *Open ED 2010 proceedings*. Barcelona: UOC, OU, BYU, (2010, September). Retrieved 17 March 2016, from <http://hdl.handle.net/10609/4995>
21. Bradshaw, P., Younie, S., Jones, S.: Open education resources and higher education academic practice. *Campus-Wide Info Systems*, 30, 186–193, (2013). doi:<https://doi.org/10.1108/10650741311330366>
22. Bliss, T., Robinson, T., Hilton, J., Wiley, D.: An OER COUP: College teacher and student perceptions of open educational resources. *Journal of Interactive Media in Education*, 1,1–25, (2013).
23. Wiley, D., Henson, H.: An initial characterization of engagement in informal social learning around MIT OCW. *Proceedings of the 7th international conference on learning sciences* (pp. 832–837). Bloomington, Indiana: ICLS. ISBN: 0-8058-6174-2, (2006, June).
24. Conole, G., Alevizou, P.: A literature review of the use of Web 2.0 tools in higher education, (2010). Retrieved 30 December 2016, from <https://core.ac.uk/download/pdf/5162.pdf>

25. Beetham, H., Falconer, I., McGill, L. Littlejohn, A.: Open practices: briefing paper. Briefing paper, JISC, (2012). Retrieved from <https://oersynth.pbworks.com/w/page/51668352/OpenPracticesBriefing>
26. Abeywardena, I. S., Dhanarajan, G., Chan, C. S.: Searching and locating OER: Barriers to the wider adoption of OER for teaching in Asia. Proceedings of the regional symposium on open educational resources: An Asian perspective on policies and practice, Penang, Malaysia: Regional Symposium on Open Educational Resources: An Asian Perspective on Policies and practice, (2012, September).
27. Hodgkinson-Williams: Benefits and challenges of OER for Higher Education Institutions. — Centre for Educational Technology, University of Cape Town, (2010). [https://libguides.library.cpp.edu/ld.php?content\\_id=13268187](https://libguides.library.cpp.edu/ld.php?content_id=13268187)
28. Kawachi, P.: Quality Assurance Guidelines for Open Educational Resources: TIPS Framework, Version-2.0. Commonwealth Educational Media Centre for Asia New Delhi, (2014). Retrieved from: [http://oasis.col.org/bitstream/handle/11599/562/TIPSFramework\\_Version%20%5b1%5d%20Copy.pdf?sequence=1&isAllowed=y](http://oasis.col.org/bitstream/handle/11599/562/TIPSFramework_Version%20%5b1%5d%20Copy.pdf?sequence=1&isAllowed=y)
29. McGreal, R.: Creating, using and sharing Open Educational Resources. OER initiative with the help of S. D’Antoni (Athabasca University), W. Mackintosh (OER Foundation) and C. Green (Creative Commons), (2013).
30. Zimmermann, C.: Guideline for the Creation of Open Educational Resources. Information and Practical Exercises for Lecturers in Higher Education, (2018).
31. Butcher, N., edited by Kanwar.: A Uvalic -Trumbic S. A Basic Guide to Open Educational Resources (OER). Prepared by for the Commonwealth of Learning & UNESCO, (2011), Retrieved from: <https://drive.google.com/drive/u/0/folders/1bVEKaMFFTDPCGJiTb5lW4Mh4LCdRqdJM>
32. Guidelines for Open Educational Resources (OER) in Higher Education: A report by The Commonwealth of Learning (COL) and The United Nations, (2011).
33. P. Kosmas, A. Parmaxi, M. Perifanou and A. A. Economides, “Creating the profile of participants in mobility activities in the context of Erasmus+: Motivations, perceptions, and linguistic needs,” in Proceedings of the 22nd International Conference on Human-Computer Interaction (HCI 2020), Copenhagen, Denmark, 19-24 July 2020. Retrieved from [https://link.springer.com/chapter/10.1007/978-3-030-50513-4\\_37](https://link.springer.com/chapter/10.1007/978-3-030-50513-4_37)