

2019 EUR 29672 EN

Andreia Inamorato dos Santos



# Practical Guidelines on Open Education for Academics

Modernising higher education via open educational practices (based on the OpenEdu Framework)

Andreia Inamorato dos Santos

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#### **EU Science Hub**

https://ec.europa.eu/jrc

JRC115663 EUR 29672 EN

PDF ISBN 978-92-76-00194-2 ISSN 1831-9424 doi:10.2760/55923

Luxembourg: Publications Office of the European Union, 2019

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#### How to cite this report

Inamorato dos Santos, A. Practical Guidelines on Open Education for Academics: Modernising Higher Education via Open Educational Practices (based on the OpenEdu Framework), EUR 29672 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-00194-2, doi:10.2760/55923, JRC115663

#### Title

Practical Guidelines on Open Education for Academics: Modernising Higher Education Practices

#### **Abstract**

These guidelines are for the academic staff of higher education institutions, with the goal of helping them move towards the use of open educational practices (OEP) in order to widen participation in education. The guidelines are meant to provide an understanding of each of the ten dimensions of open education based on the OpenEdu Framework (JRC, 2016), and to show how academics can start using OEP to prompt inclusion and innovation as important values, starting from their day-to-day activities such as teaching, knowledge creation and research.

### **Foreword**

This study presents practical guidelines for the implementation of open education practices in the higher education sector. It aims to inspire lecturers, researchers and management staff of universities to design and implement actions that can tap into the potential of digital technologies and open education practices (OEP) to widen participation in education; to encourage innovation in education and training; improve access to lifelong learning; and impart the new (digital) skills and competences needed for employment, personal development and social inclusion.

This report, *Practical Guidelines on Open Education: Modernising Higher Education Via Open Educational Practices (based on the OpenEdu Framework)*, is a contribution to building a JRC knowledge base on Open Education, developed mainly on behalf of the European Commission's Directorate General for Education, Youth, Sport and Culture (DG EAC). It is connected to earlier published studies such as the OpenEdu framework and related reports which can be found at <a href="https://ec.europa.eu/jrc/en/open-education">https://ec.europa.eu/jrc/en/open-education</a>.

The JRC has carried out research on <u>Learning and Skills for the Digital Era</u> since 2005. It aims to provide evidence-based policy support to the European Commission and its member States on how to harness the potential of digital technologies to encourage innovation in education and training practices; improve access to lifelong learning; and impart the new (digital) skills and competences needed for employment, personal development and social inclusion. More than 20 major studies have been undertaken on these issues resulting in more than 120 different publications.

Recent work on capacity building for the digital transformation of education and learning, and for the changing requirements for skills and competences, has focused on the development of digital competence frameworks for citizens (DigComp), educators (DigCompEdu), educational organisations (DigCompOrg) and consumers (DigCompConsumers). A framework for opening up higher education institutions (OpenEdu) was also published in 2016, along with a competence framework for entrepreneurship (EntreComp). Some of these frameworks are accompanied by (self-) assessment instruments. Additional research has been undertaken on Learning Analytics, MOOCs (MOOCKnowledge, MOOCs4inclusion), Computational thinking (Computhink) and policies for the integration and innovative use of digital technologies in education (DigEduPol). We have also published the report Blockchain in Education in 2017.

More information on all our studies can be found on the JRC Science hub: <a href="https://ec.europa.eu/jrc/en/research-topic/learning-and-skills">https://ec.europa.eu/jrc/en/research-topic/learning-and-skills</a>.

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## Acknowledgements

We would like to thank all the experts who took part in the design and validation of the OpenEdu Framework (2016), and the experts who provided input for these guidelines (2018-2019), namely: Agnes Kukulska-Hume, Cable Green, Carina Bossu, Christian Stracke, Ebba Ossiannilsson, Fabio Nascimbeni, Gabi Witthaus, Ilona Buchem, Jim Devine, Josep Duart, Marcelo Maina, Martin Ebner, Neil Butcher, Robert Schuwer. Also very special thanks go to colleagues of the European Commission who supported this work: Georgi Dimitrov (DG EAC), Anusca Ferrari (DG EAC), Sumathi Subramaniam (DG EAC), Konstantin Scheller (SRSS, former DG EAC), Deirdre Hodson (DG EAC), Ioannis Maghiros (JRC) and Yves Punie (JRC).

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## About the guidelines

The Practical Guidelines on Open Education for Academics: Modernising Higher Education via Open Educational Practices (based on the OpenEdu Framework) is a joint effort between DG EAC and DG JRC to foster the uptake of open educational practices in higher education, with the aim of widening access to education and promoting inclusion as per the Digital Education Action Plan<sup>1</sup>. The guidelines are based on the OpenEdu Framework (Opening up Education: A Support Framework for Higher Education Institutions<sup>2</sup>).

#### Who are the guidelines for?

These guidelines are for **individual academic staff**: the higher education practitioner who can take up the role of lecturer, researcher or faculty coordinator, or indeed combine those roles simultaneously; and also academic-support staff such as technicians, librarians and students' services personnel. In some cases higher education managerial staff (e.g. rectors, vice-rectors, faculty deans) are academics who have moved towards administration

- in such cases these guidelines can serve as a source of inspiration for them in order to think of ways to empower each individual to move towards open educational practices (OEP), with the support of institutional policies. The guidelines have been developed for academics who would like to start exploring or to go further in implementing different aspects of Open Education in their higher education institution.

#### What is Open Education?

Here is the working definition of open education in the OpenEdu Framework:

"Open education is a way of carrying out education, often using digital technologies. Its aim is to widen access and participation to everyone by removing barriers and making learning accessible, abundant, and customisable for all. It offers multiple ways of teaching and learning, building and sharing knowledge. It also provides a variety of access routes to formal and non-formal education, and connects the two" OpenEdu Framework, JRC 2016:10.

Open education is about a set of practices that together can lead higher education to be more inclusive, in line with societal changes, and also to be more innovative in terms of making the most effective use of teaching and educational resources, research and students' services. These practices are often referred to as 'open educational practices', and in the OpenEdu Framework they are presented within the context of the ten dimensions of open education:



- 1. <a href="https://www.coe.int/t/dg4/highereducation/recognition/lrc\_EN.asp">https://www.coe.int/t/dg4/highereducation/recognition/lrc\_EN.asp</a>
- 2. <a href="https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/opening-education-support-framework-higher-education-institutions">https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/opening-education-support-framework-higher-education-institutions</a>

These ten dimensions interrelate to one another, and together contribute towards opening up education in a holistic way. However, it is not always obvious how to 'do and support open education', starting from the academic's own practice. These guidelines are meant to provide an understanding of each of the ten dimensions of open education, and to show how academics can start using open educational practices to prompt inclusion and innovation as important values, starting from their day-to-day activities such as teaching, knowledge creation and research.

#### Open educational practices: a mindset shift towards openness

Open educational practices can lead to more inclusive education systems, but this requires a shift in mindset. Each individual academic can be more open in the way they produce and share knowledge, in the way they teach and assess students, and in collaborating with others. And the same is true of higher education institutions. By shifting their mindset and practices towards open educational practices, academics can start changing the landscape of higher education by prompting changes in their own institutions.

These guidelines can help the academic to streamline their open educational practices and enable more profound changes in the European higher education system, such as the more rapid and effective recognition of open

learning, which in turn can enhance the opportunities for employment for all learners. When higher education institutions move towards a set of shared practices. opportunities for collaboration become more evident.

#### How to use the quidelines

Each of the 10 dimensions of open education is individually presented. There is a rationale for each dimension, followed by a reflection upon the benefits and challenges that each dimension brings to stakeholders at four levels: academics, learners, institutions and society. Then, some statements for reflection for each dimension are presented (e.g. "I take the initiative to ..." or "My institution supports...."), in which the academic is invited to reply accordingly. This is followed by suggestions about how each statement can be put into practice.

The statements for reflection have been designed following a progression model: they are numbered according to the most basic practices (1) to slightly more complex ones (2, 3, 4...)

The explanations are designed so as to trigger reflection on how academics can change their own practice while at the same time **becoming empowered** to lead changes at an institutional level, by being an advocate of open educational practices in their own institution and in their professional network.



### Open Education

Open education is about a *set of practices* that together can lead higher education to be more inclusive, in line with societal changes, and also to be more innovative in terms of making the most effective use of teaching and educational resources, research and students' services. These practices are often referred to **as open educational practices**. In the context of the OpenEdu Framework they are presented within the context of the ten dimensions of open education. These ten dimensions interrelate to one another, and together contribute towards opening up education in a holistic way.

The 10 Dimensions of Open Education
OpenEdu Framework



#### What is open education?

"Open education is a way of carrying out education, often using digital technologies. Its aim is to widen access and participation to everyone by removing barriers and making learning accessible, abundant, and customisable for all. It offers multiple ways of teaching and learning, building and sharing knowledge. It also provides a variety of access routes to formal and non-formal education, and connects the two"

OpenEdu Framework JRC 2016:1



## Open Educational Practices: a mindset shift towards openness

Open educational practices can lead to more inclusive education systems, but this requires a shift in mindset. Each individual academic can be more open in the way they produce and share knowledge, in the way they teach and assess students, and in collaborating with others. And the same is true

of higher education institutions. By shifting their mindset and practices towards open educational practices, academics can start changing the landscape of higher education by prompting changes in their own institutions.

9 European Union, 2019





# OpenEdu Framework

The 10 Dimensions of Open Education



## Access

Widening Participation in Education





### Access Widening Participation in Education



#### What does access mean in open educational practices?

Opening up access to education is about removing or lowering economic, technological, geographical and institutional barriers that may obstruct the doorway to knowledge. It has to do with creating the enabling conditions for anyone to study and learn, formally or non-formally, with or without digital technologies. In practice, from an educational institution's perspective, access can be promoted at four levels: 1) access to open programmes, which leads to a degree or qualification; 2) access to open courses, which means content presented in a didactical way with the goal of teaching about a subject, such as Massive Open Online Courses (MOOCs); 3) access to content, which means access to different types of openly licensed educational materials (OER) such as texts, pictures, podcasts etc.), and 4) access at a transversal level, which is accessibility - making content easily understood by all, including by those with specific learning or physical needs. It also means increased access to communities of practices and networks, including all applicable educational services offered by education institutions.

#### Benefits of widening access to education

By widening access to formal and non-formal education we are increasing the possibilities for individuals to study and learn regardless of their context or social and personal condition.

Academics who promote access and accessibility in education improve their teaching practices. They adapt their teaching methodologies to make further use of digital technologies whenever possible, because this way they can share their courses and OER more easily and effectively. They become more conscious of the potential reach of their courses and content, and of the different audiences in the virtual world. They also benefit from increased visibility and reputation.

**Learners** will have opportunities to learn, re-skill and upskill whenever needed, therefore widening participation in education to various individuals who might otherwise not be able to access education, either formally or nonformally. This is due to the reduced barriers to education promoted by open education practices, such as: lower or no fees, lower or no entry requirements for courses and programmes, facilitated recognition of non-formal learning, no geographical boundaries, open and free online courses (to include MOOCs), and education and training on demand. Learners can also improve their digital competence, resourcefulness and perseverance via open learning opportunities. In addition, individuals with specific learning needs or disabilities will have adapted educational materials



and opportunities to learn, since OER, websites and tools should meet accessibility criteria whenever possible.

**Institutions** benefit from a wider audience made up of registered and non-registered learners, also known as open or lifelong learners. This helps institutions meet their social mission. There is also potential for new sources of revenue, coming from the registrations of learners they would not be able to reach otherwise.

**Society** benefits from increased learning opportunities for all, independently of their location, age, race, sex, or physical and social condition. Greater access to educational content, courses and study programmes enables individuals to reach out for knowledge when they need it while at the same time contributing to a fairer and more inclusive society.

#### Challenges to widening access to education

Promoting access to education at various levels requires making changes in current practices with the aim to make them more open.

For **academics**, the challenges can be various, such as the need to become more digitally competent to be able to create, adapt and reuse educational materials with digital technologies and release them as open educational resources. Another challenge is the insecurities generated by reaching out to a diverse audience. Exploring with new ways of teaching, such as by developing free and open online courses or MOOCs, can require confidence. Reaching new learners way beyond the classroom or the virtual environment, therefore working as a 'mirror' to the inside of their institution and to the quality of their teaching practice, is a challenging process.

For **learners**, one of the challenges is to find the resources they most need, since studying with open courses such as MOOCs and OER requires knowledge of how to look for this type of learning opportunity online. In order to do so, learners will need to be digitally competent to search for key words, to search in OER repositories and MOOC platforms, and above all to be proactive in looking for opportunities to learn in the open world, beyond their countries and regions. This might also entail the need to develop their competences in foreign languages. Open learners and lifelong learners need to be autonomous learners with the motivation and self-discipline to study alone whenever necessary.

It is up to **institutions** to increase the findability of OER and open online courses and MOOCs, and to support learners in every possible way to make them ready for such types of open learning. For example, by building learning paths to help learners decide which courses to study, in turn leading them to a qualification whenever possible. This also means that new strategies for educational delivery will need to be sought, at the same time requiring more effort to make resources accessible to all. The challenges include establishing a culture of change at the institutional level, and making available the necessary financial and human resources.

Society, in turn, faces the challenge of accepting and supporting less traditional forms of education that are open and flexible and also offer equal opportunities. This means valuing open certificates and degrees, with the understanding that open learning and flexible education are not different from formal education in terms of learning outcomes, just different in format, delivery and assessment methods, timeframe and learner motivation.







1. I take 'access' into consideration in all my courses and programmes by contemplating the different open licences, media and formats that I could use.	Access to content, courses and programmes  You can promote access to content for all learners by 1) making content available as open educational resources, that is, with an open licence;  2) making content available in digital formats, which can be accessed by anyone who has an internet connection and is digitally literate; 3) creating a syllabus that can be completed in a modular way, therefore enabling more flexibility.
2. I support my institution in opening up access to content (OER) and courses to all learners.	Institutional engagement: promoting access to content You can encourage your institution to be more open 1) by advocating adequate infrastructure for academics who aim to offer OER, MOOCs and free and open online courses; 2) by making sure that you create and promote varied content and courses, such as in less-used languages and for different user groups.
3. I encourage my institution to provide access to full courses for registered and also non-formally registered learners.	Institutional engagement: entry to courses and completion Institutions can enable non-formally registered learners to access their courses online, with a flexible pathway to course completion, in which they can gradually accumulate the credits needed for a full degree (e.g. by taking MOOCs or other types of free and open online courses which offer credits compliant with the European Credit Transfer System - ECTS). You can think of which possible learning pathways could lead a non-formally registered learner to a full degree in your specialist subject area. You can develop such pathways and make them available online as guidance for learners, at the same time checking how these pathways could be formally recognised by your own and third-party institutions. You can also check which courses are available 'out in the world' and in your institution for learners to follow such pathways; and seek to progressively make such courses available whenever possible, in collaboration with other institutions.
4. My institution promotes the accessibility of educational content, courses and full degrees.   Yes  No	Institutional engagement: accessibility  Accessibility is an important part of inclusion and widening access to education. It has to do with enabling all to study regardless of personal characteristics. For example, measures towards accessibility open up learning opportunities for learners with disabilities (e.g. those who are deaf or blind, or who have reduced mobility) or language deficiencies (e.g. migrant learners). You can help promote accessibility measures in your institution by experimenting with assistive technologies, which focus on the voice recording of written text, and adapted websites and social media. You can also try to get involved in the implementation of accessibility guidelines at an institutional level and in your own personal webpages and learning environments.



#### Access

#### **Widening Participation** in Education

Opening up access is to education is about removing or lowering economic, technological, geographical and institutional barriers that may obstruct the doorway to knowledge.







**Academics** who promote access and accessibility in education make use of digital technologies to share their courses and open educational resources (OER) more easily and effectively.







**Learners** can improve their digital competence. resourcefulness and perseverance via open learning opportunities. Individuals with specific learning needs or disabilities will have adapted educational materials and opportunities to learn.





**Institutions** that promote access to and accessibility in education benefit from a wider audience, also known as open learners.



**Society** benefits from increased learning opportunities, independently of their location, age, sex, race or physical and social condition. Open educational practices promote greater access to educational content and courses to all.



#### What can I do to promote access to education opportunities?

#### YOU CAN...



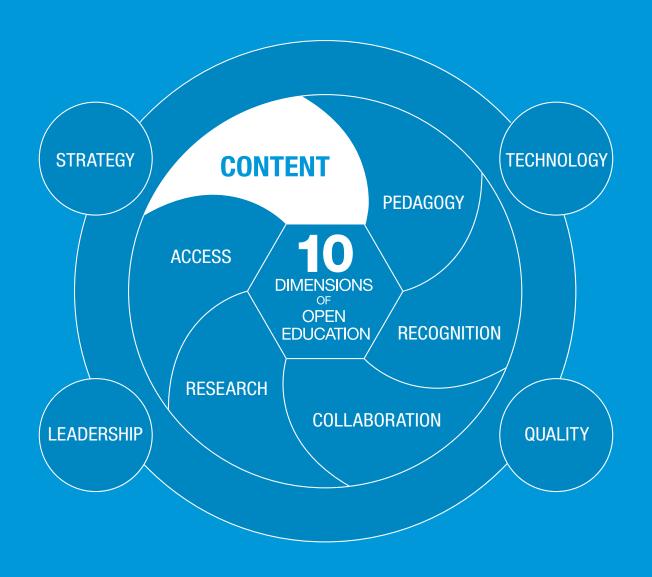
make the content you produce available as an Open Educational **Resource (OER),** and distribute it in digital formats so that anyone who has Internet access can use it. Individuals with specific learning needs or disabilities will have adapted educational materials and opportunities to learn.

make content accessible to a diverse profile of learners, by taking measures towards accessibility for learners with disabilities, or language deficiencies. For example, you can voice-record texts and make accessible websites for the visually impaired.

create modular courses and make them available as OER. Promote access and accessibility in your institution, in order to reach the open learners. In doing so you can think alongside your institution of possible learning pathways that could lead a non-formally registered learner to achieve a full-degree via open learning.

encourage your institution to have adequate infrastructure to offer OER, Massive Open Online Courses (MOOCs) and free and open online courses to the world.





## Content

Open Educational Resources (OER)





### Content Open Educational Resources (OER)



#### What are OER?

OER are educational materials for teaching and learning in any format or media, as well as research outputs, data, and literary works which are free of charge (gratis), and openly licensed (libre), or in the public domain.

Examples of OER are: curricula, course materials, lesson plans, books and textbooks, videos, podcasts, multimedia applications, course work, assessment templates, photos, brochures, reports, research data, scientific papers, websites, blogs, and any other resource or tool that has been designed for teaching, learning and research and that has a visible open licence.

#### Benefits of OFR

OER helps to increase access to education by enabling educational materials to be freely shared, adapted and reused without the infringement of copyright.

The benefits of **academics** releasing their content as OER include raising the visibility of their teaching materials beyond the university walls, to reach an external audience of lifelong learners and other academics. This increases the academics' own visibility and reputation. At the same time, the quality of the released OER can improve because their exposure to an external audience can lead to useful comments, revisions and updates. Teaching practices can also improve by using OER (e.g. releasing, reusing and remixing) because academics will be exposed to the teaching methods of other colleagues from very different backgrounds. They will also show their own way of teaching to others via publishing OER as written texts, videos, audio or other types of media, thereby contributing to the sharing

ethos of OER, in which it is the participation of the wider community that adds value to the educational practice.

Lifelong learners have the opportunity to learn from materials created by academics with the same quality of the educational materials offered to formally registered learners. Learners can also use OER as a 'taster' to different subjects before choosing to formally join a specific course. They can benefit from the fact that OER are free of charge, requiring them only to bear the costs of internet access and printing, if and when appropriate. Sometimes these costs can be covered by others, such as community centres.

**Institutions** gain greater visibility as a consequence of OER being released and used, in addition to meeting their public service mission. This leads to a higher profile, a greater number of formal registrations, and new



opportunities for collaboration for all. Institutions also gain from improvements in the quality of teaching materials, because academics who release OER are conscious that their material is being exposed to a wider audience and therefore tend to make sure it is of the best possible quality. In addition, the open licences on OER allow it to be reused and remixed, giving extended use and lifetime to educational materials.

Savings may be made on the basis of lower costs of content creation and updating, which can be passed on to learners, parents, and **society** as a whole. For example, textbooks can be updated more frequently and probably more cheaply since the content is online and open to revision by anyone. OER are a tool for widening access to education.

#### Challenges arising from OER

The challenges in using and reusing OER are mostly technical and/or cultural.

For **academics**, the technical challenges include needing to know how to choose the best licence for their purpose. understanding the principles of OER reuse and sharing, and understanding how to use the available technologies and platforms in order to find, reuse, tag and share OER. These technical challenges relate to the digital competence of the academic or learner. Using and reusing OER does not require a high level of digital competence - just the minimum necessary to find or create an OER and make the best use of it for one's own purposes. Academics can be fearful of losing authors' rights over the content or, because of copyright restrictions, slightly apprehensive about changing content prepared by others. Another cultural challenge is that of opening the way to new types of editing and distribution services for educational materials and academic books, which are not (only) provided by traditional publishing houses.

**Learners** will need to be able to search for and find OER. In order to promote the effective use of OER, learners will also need to know how to identify OER and understand the open licence. At the same time, learners can be OER creators, in which case they will face similar challenges to academics in relation to digital competences.

**Institutions** may encounter resistance by staff members in shifting towards a culture of reusing educational materials and sharing. Making one's own content available to others may at times feel threatening or too exposed. It requires, therefore, that institutions invest in awareness raising and training for staff, both addressing their concerns and helping them reap the benefits of creating and using OER. Institutions also need to consider embedding OER into their normal practices in order to develop a business model for them.

**Society** as a whole is probably not yet used to the <u>concept</u> of the 'commons', in this case openly licensing educational materials and using them in a socially responsible way. Combined efforts from different stakeholders are required in order to raise awareness of OER and ensure their production, use and longevity.







1. I can identify the licence of an educational resource.  □ Yes □ No	<b>Identify open licences:</b> Educational resources are <i>open</i> when they have an open licence or are in the public domain. An educational resource without an open licence is not an open educational resource, even if the resource is available online and free of charge. If you find an educational resource on the web, search for its <i>open</i> licence before using it. It is the open licence that will tell you what you can or cannot do with this OER. For instance, some resources are available for re-use but you cannot revise nor adapt them. Bear in mind that without an open licence the content is still all-rights-reserved copyrighted.
2. I open license the educational and research materials that I produce.	<b>Use open licences:</b> If you are producing educational resources that you want to release as an OER, you'll need to choose an open licence for it. There are many different types of open licences and you can choose the one that best corresponds to the permissions you want to grant to users. You can find commonly used open licences <a href="here">here</a> . Make sure that the open licence is visible in your educational resource.
3. I appropriately reference the OER that I use (whether I change them or not).	<b>Referencing OER:</b> Knowing how to properly <u>reference</u> an OER is essential, particularly if you have adapted, translated or remixed it. The main ethical characteristic of the OER movement is that the <i>original author will always be referenced</i> as such. When making an adaptation or revision of an OER, always cite the original author(s) and the full reference source, and then cite the revision author(s) and the remaining publication information. The same applies to revisions of revisions, thus generating a 'cascade' of authorship information leading back to the original author(s).
4. I tag OER appropriately to increase their searchability and findability.	<b>Tagging OER:</b> Tags are keywords that help identify your OER. They are the keywords that indicate the key information that your content contains. Try to research your keywords before using them as tags (or hashtags) in order to make sure that your content is appropriately classified and can be found easily by search engines. Appropriate tagging will make your content more relevant and will increase the potential for its use, since it will be easier to find. Both findability and searchability are increased with appropriate tagging. For example: imagine you have just created a lesson plan on statistics as a refresher course to use with your first-year university students, which you want to share as an OER. You could tag this lesson plan as: #OER #refreshercourse #statistics #1styearuniversity #lessonplan
5. I support my institution in the implementation of OER as an open education practice.	<b>Institutional engagement:</b> I support my institution in implementing OER practices. I not only embrace OER in my own practice but also contribute towards an institutional policy which is OER-compliant. I help my colleagues and learners to understand OER principles and licences, and the technologies used to remix and share OER. I am an OER ambassador in my institution.



#### Content

#### **Open Educational Resources** (OER)

OER are educational materials for teaching and learning in any format or media, as well as research outputs, data, and literary works which are free of charge (*gratis*), and openly licensed (*libre*), or in the public domain. OER helps to increase access to education by enabling educational materials to be freely shared, adapted and reused without the infringement of copyright.







**Academics** who release their content as OFR raise the visibility of their teaching materials and reach an external audience of lifelong learners and other academics.





**Learners** have the opportunity to learn according to their own educational and professional development needs. Learners can also use OER as a 'taster' to different subjects before choosing to formally join a





**Institutions** gain greater visibility as a consequence of OER being released and used, in addition to meeting their public service mission. This leads to a higher profile, a greater number of formal registrations, and new opportunities for collaboration for all.



**Society** benefits from economic savings that may be made on the basis of lower costs of content creation and updating. Textbooks can be updated more frequently and probably more cheaply since the content is online and open to revision by anyone.





YOU CAN...



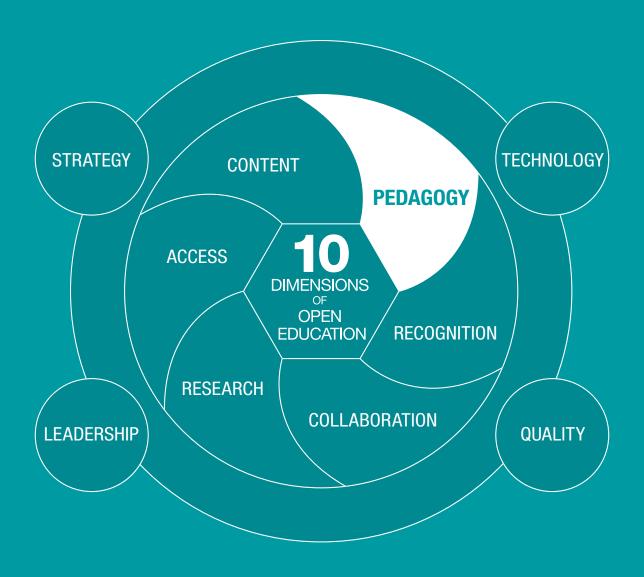
use open licences. If you are producing educational resources that you want to release as an OER, you'll need to choose an open licence for it. There are many different types of open licences and you can choose the one that best corresponds to the permissions you want to grant to users.

support your institution implementing OER practices, by embracing OER use yourself at the same time helping your colleagues and learners to understand OER principles and licenses.

learn how to appropriately reference and tag OER. The main ethical characteristic of the OER movement is that the *original author* will always be referenced as such. And by tagging your OER, you are using **#keywords** that indicate the key information that your content contains therefore raising its findability.

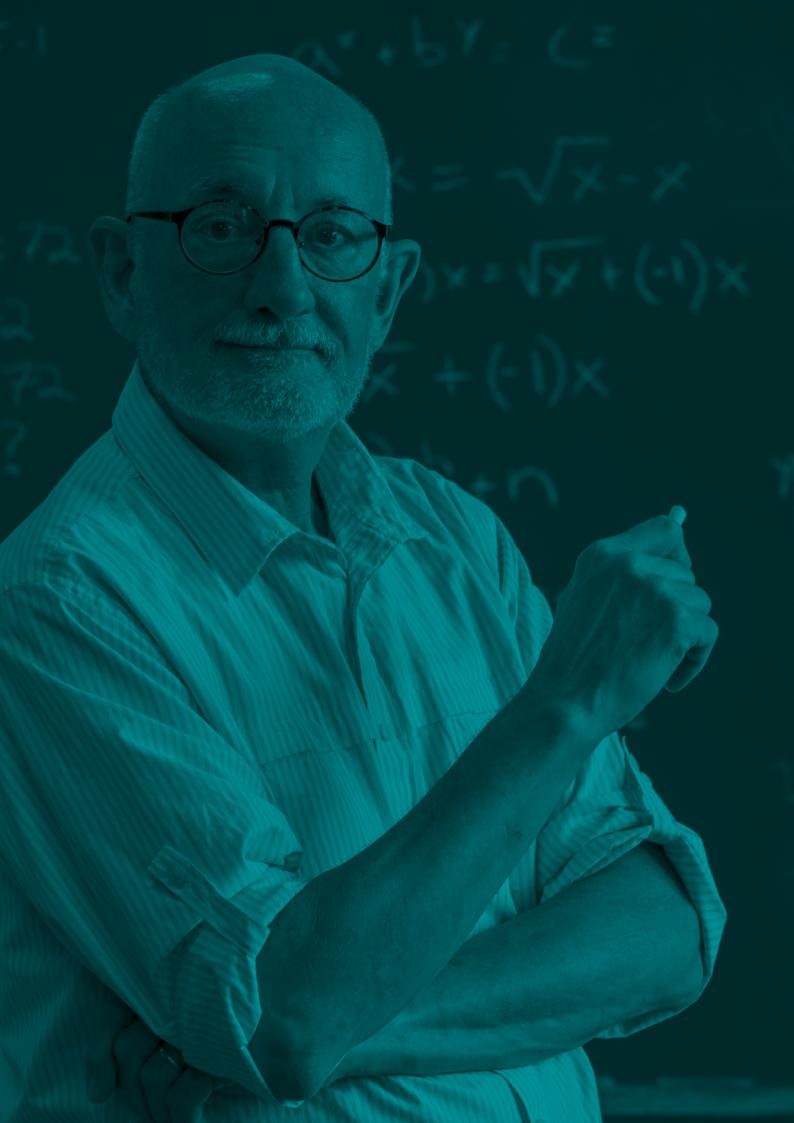


specific course.



# Pedagogy

Open Educational Practices (OEP)





### Pedagogy Open Educational Practices (OEP)



#### How can we approach pedagogy in open education?

Open educational practices (OEP) make the range of different teaching and learning approaches more transparent, shareable and visible. OEP refers to specific teaching and learning practices that not only use OER but are also open to change, adaptations and collaboration. Open educational practices are also associated with the formal recognition of open learning certificates and credentials. These practices are often based on the use of digital technologies. OEP support the use and reuse of open educational resources, curricula, recorded lectures and lesson plans, as well as the sharing of teaching and learning experiences and strategies. The vision of OEP is to move away from a focus on resources to instead focus on the 'practices' and methods that are part of the teaching and learning of a given subject (such as sciences, engineering, etc.).

In addition, OEP foster the sharing of syllabi, lesson plans, coursework, assessments and expected learning outcomes in order to increase the transparency of teaching and learning practices as well as to prompt peer learning for all the involved parties: academics, learners, researchers. OEP are also meant to be applied in a way that supports learners in the design of their own learning paths, with a wide choice of learning resources, therefore fostering open learning.

#### Benefits of promoting openness in pedagogy

The use of OEP in teaching and learning promotes the culture of sharing. It leads to the increased availability of open educational resources and to teaching and learning practices that are learner-centred and based on peerlearning and collaboration.

**Academics** can learn from one another by looking at the ways their peers teach, or by having access to their educational resources and syllabi.

**Learners** benefit from a learner-centred approach, with the freedom to design learning paths that are suitable to them. In addition they are exposed to different teaching approaches, which creates an education experience more conducive to learning.

**Institutions** benefit from improved teaching practices and the sharing of curricula, syllabi and open educational resources. This promotes collaboration between institutions and alternative continuous professional development practices.



**Society** benefits from being able to access courses and programmes offered by a variety of educational institutions, each one of them offered with a specific teaching approach and educational resources. This enables a richer, diverse and more inclusive education experience, open to all.

#### Challenges to promoting openness in pedagogy

**Academics** should re-examine their teaching practices to find ways in which they can share, collaborate and learn from others – this requires a shift in mindset. The challenge is to open their pedagogical approach to the world, and allow comments that will either reinforce this approach or propose changes to it. It also requires learning about the technologies that support openness, and how to tap into teaching approaches that will promote transparent classroom-based activities and open learning.

**Learners** will be faced with opportunities for learning that require them to be open to creativity, collaborative online activities and to less prescriptive teaching approaches. They will be required to have both self-initiative and selfdiscipline, and to learn how to give and receive feedback from peers.

**Institutions** will probably face resistance from some academics towards the sharing of educational practices, including open educational resources. They will therefore need to have in place a strategy to revisit how OEP are being promoted in the institution and how academics are supported in carrying out OEP.

**Society** will encounter different ways of teaching, from different academic contexts, via open education practices. As a result, appreciation and respect for a variety of teaching styles need to be sought, which will serve as an important means of encouragement for academics to open up their teaching to the world.







1. I apply open educational practices in my teaching.  ☐ Yes ☐ No	<b>Open educational practices:</b> You can change your pedagogical practices to embed openness at all possible levels. For example, you can share your lesson plans, assessment templates and learning design with other educators. In addition, you can share the recording of your lessons by using video or podcasts, in order to make your taught subject visible and accessible to all. You can creatively design course tasks that are collaborative and that require the involvement of peers whenever appropriate. You can create and reuse teaching materials as open educational resources (OER). You can also reuse other OER and redistribute them on the internet.
2. I know how to use a wide range of digital technologies to support the sharing of my teaching practices and open educational resources, as well as to apply a usercentred approach in my teaching.	Using digital technologies to support OEP: You are confident in using a wide range of digital technologies to enhance the potential for creating and sharing teaching practices and open educational resources. You can modify your usual practices as part of this openness, and share and access content in repositories and in different open learning environments whenever appropriate. Your teaching methods reflect an ongoing commitment to open education and to learner-centred approaches supported by digital technologies.
3. My institution promotes open learning supportservices as part of its pool of open educational practices.	Institutional engagement: Promoting open learning policies and services. You act as an ambassador for your institution to promote open education policies that include all types of learning services for both registered and (open) lifelong learners, such as learning pathways design advice, open tutoring, open educational resources, assessment, MOOCs, open online courses, recognition of prior learning, and accreditation support. You advocate the importance for your institution to focus on the development of central services to both formally registered learners and (open) lifelong learners. You strive to create a support environment for your colleagues so as to help them understand and carry out OEP.



### Pedagogy

## Open Educational Practices (OEP)

Open educational practices (OEP) make the range of different teaching and learning approaches more transparent, shareable and visible. OEP refers to specific teaching and learning practices that not only use OER but are also open to change, adaptations, sharing and collaboration.







**Academics** can learn from one another by looking at the ways their peers teach, or by having access to their educational resources and syllabi.



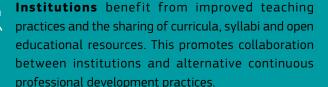




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**Society** benefits from being able to access courses and programmes offered by a variety of educational institutions, each one of them offered with a specific teaching approach and educational resources. This enables a richer, diverse and more inclusive education experience, open to all.

#### What can I do to promote OEP?



#### YOU CAN...



make use of digital technologies to share teaching practices, to create free and open online courses and MOOCs, and to make your content available in different repositories and open learning environments.

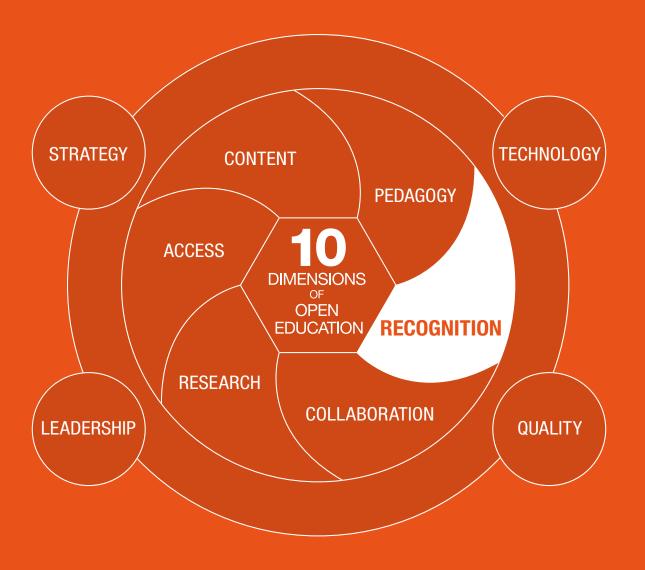
act as an ambassador for your institution to promote open education policies that include all types of learning services for both registered and (open) lifelong learners, such as learning pathways' design advice, open tutoring, open educational resources, assessment, MOOCs, free and open online courses, recognition of prior learning, and accreditation support.

create and reuse teaching materials, making them available as open educational resources

**(OER)**. You can share different types of OER, such as lesson plans, assessment templates and learning design with other educators. In addition, you can share the recording of your lessons by using video or podcasts, in order to make your taught subject visible and accessible to all.

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# Recognition

**Open Learning** 





### Recognition **Open Learning**



#### Recognition in open education

Recognition of open learning has two meanings:

a) It is the process, usually carried out by an accredited institution, of issuing a certificate, diploma or title which has formal value even if the learning has taken place non-formally. This process is also called credentialisation, and usually involves an assessment of the individual's learning.

b) It is the process of formally accepting<sup>3</sup> credentials, such as a badge, a certificate, a diploma or title issued by a thirdparty institution, which attest that a set of learning outcomes (e.g. knowledge, know-how, skills and/or competences) achieved by an individual has been assessed by a competent body against a predefined standard.

#### Benefits of recognising open learning

The recognition of open learning enables open education learners to make the transition from non-formal to formal education should they wish to do so, as well as to achieve career progress.

Recognition of open learning enables learners to use their open learning certifications towards continuous professional development and career progress, and as a path towards new qualifications. When submitting their credentials for recognition, learners expect to gain 'validated credits' which can help them move ahead professionally, academically and in their personal lives.

By more easily and rapidly recognising previous open learning4 as valid credits towards a course or degree, academics can have a wider cohort of learners with appropriate entry-level knowledge and skills joining their courses. This expands the reach of their teaching, course materials and research, and can result in enhanced reputation and professional recognition both for them personally and for their institutions.

Higher education institutions offering open learning will have a diverse cohort of learners and can help them bridge non-formal with formal learning by providing paths for open

<sup>3.</sup> The Lisbon Convention already proposes the recognition of credentials for formal learning https://www.coe.int/t/dg4/highereducation/recognition/lrc\_EN.asp

<sup>4.</sup> The Council adopted a Recommendation on promoting automatic mutual recognition of higher education and upper secondary education training qualifications and the outcomes of learning periods abroad (https://www.consilium.europa.eu/en/meetings/eycs/2018/11/26-27/#). These open education guidelines propose that similar principles should be adopted for open learning diplomas and certificates, issued by accredited higher education institutions and other accredited organisations, to leaners who go through individual assessment with identity verification.



learning recognition, and by providing micro-credentials. This helps institutions meet their social mission, which is a commitment to community engagement, widening participation, and public responsibility. IF HEIs can deliver and accredit learning in more flexible ways, they can better respond to the changing needs of society, and they can supply knowledge that is needed in the fast-changing job market⁵.

Finally, society benefits from better provisions for lifelong learning, enabling individuals to re-skill and upskill more cheaply, quickly and efficiently. In addition, civil society benefits from an increased number of professionals with updated training in the job market.

#### Challenges to widening access to education

The thorough verification of the learners' identity when assessment and certification are carried out is considered essential by universities and is also highly valued by learners. The main challenges are the costs associated with promoting and undertaking such identity validation, while at the same time establishing the trust and transparency needed among institutions and society to facilitate the recognition process.

For **institutions**, identity validation during assessment is one of the main challenges for the recognition of open learning, particularly as assessment of open learning is often carried out online. They need to have a strategy to put in place mechanisms for identity verification that are reliable and at the same time scalable, such as biometrics, use of webcams, voice and iris recognition, typing patterns etc. There is also a role for traditional identity verification methods, such as face-to-face assessments in assessment centres. Establishing a secure identity-verification method for open leaners requires time, effort and financial investment in identity-verification and authentication technologies.

For **learners**, the challenges are mostly related to understanding, accepting and complying with the various identity-verification methods that may be required from them. This may also include ad hoc payments towards such verifications, since learners may be required to partially meet their costs whenever appropriate.

Academics need to agree amongst themselves on fasttrack recognition paths within faculties/departments and institutions, thus enabling scalability in a short and efficient timescale. Also, when providing open courses, they need to include explicit information for the public about the syllabi and assessment methods, so that interested parties can easily check whether what has been studied and achieved by the learner is compliant with their requirements for recognition. In addition, whenever possible, academics who offer open courses need to align the learning design of their courses with methods that contribute towards identifying learners and minimise the scope for cheating.

In wider **society**, employers and community/civic organisations will increasingly need to respond to individuals seeking career progress and opportunities for personal development through open learning activities. Social recognition will need to be sought for open learning activities and the formal credits/qualifications to which they can lead, and therefore it will be essential that the institutions awarding the credits/qualifications have a good reputation.



#### **Statements for self-reflection**



1. I take the initiative in designing course syllabi in alignment with other HE institutions in my country and abroad, whenever there are no restrictions applied.	Creating fast-track recognition pathways. As an academic you may be responsible for evaluating and validating requests for the recognition of prior learning. In order to facilitate this process and enable its scaling up, you can take the initiative of mapping your course syllabus against those of other HE institutions that you wish to collaborate with. You can also align your course syllabus with other those of other institutions in order to facilitate the recognition of open learning and content reuse.
2. I take the initiative in designing assessment tasks that make it easier to confirm learners' identities and prevent cheating.	<b>Designing trusted assessments.</b> You can help in the process of verifying learners' identities by designing course and assessment tasks that require the learners to provide occasional authentic and individual input, which would be trackable if needed.
3. My institution supports and promotes the recognition of open learning by allowing our open courses to offer digital credentials and credits within the ECTS framework, and has policies to recognise the certificates and credits issued by other institutions.	Institutional engagement: promoting the recognition of open learning. You can support your institution in the process of enabling learners to make the transition from non-formal to formal education whenever they want, by discussing and agreeing on fast-track recognition policies with colleagues from your institution and from abroad. In order to do so, the institution needs to promote transparent open educational practices that seek to help learners create a study path that will lead to a recognisable certificate or credential, while at the same time enabling employers and other institutions to verify the quality and veracity of such certificates and credentials. The issuing of open badges and microcredentials within the ECTS framework facilitates the recognition process.
4. My institution promotes robust assessment and identity verification in open learning certification.	Institutional engagement: robust assessment and identity verification. You can support your institution in offering open learning, issuing open learning certificates and credentials issued by third party institutions. Open learning certificates and credits can be more easily recognised by third parties if robust assessment practices are carried out, particularly when that assessment leads to formal certification. You can design assessment practices that are transparent and have visible requirements.
5. My institution seeks social recognition for its open learning practices, certificates and credentials, and takes action so as to make that happen.	Institutional engagement: social recognition of open learning In the context of open education recognition, social recognition is the value given by society to badges and micro-credentials obtained in the completion of an MOOC, open online course or any other type of learning via open education (such as opencourseware - OCW). Although social recognition is not a formal type of recognition of learning achievements, it has increasingly been accepted as proof of knowledge by employers. Institutions that seek to have a good reputation in open education tend to increase the value of the open learning certificates they issue. You can help your institution to do so by actively engaging in making these open learning practices known to your own students and to the outside world, proactively raising awareness within your network.



### Recognition

#### **Open Learning**

The recognition of open learning enables open education learners to make the transition from non-formal to formal education should they wish to do so, as well as to achieve career progress. Recognition of open learning enables learners to use their open learning certifications towards continuous professional development and career progress, and as a path towards new qualifications.





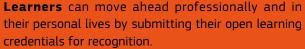


**Academics** can have a wider cohort of learners with appropriate entry-level knowledge and skills joining their courses, by more easily and rapidly recognising previous open learning as valid credits towards a course or degree.















**Institutions** offering open learning will have a diverse cohort of learners and can help them bridge nonformal with formal learning by providing paths for open learning recognition, and by providing micro-credentials. This helps institutions meet their social mission, which is a commitment to community engagement, widening participation, and public responsibility. IF HEIs can deliver and accredit learning in more flexible ways, they can better respond to the changing needs of society, and they can supply knowledge that is needed in the fast-changing job market.



**Society** benefits from better provisions for lifelong learning, enabling individuals to re-skill and upskill more cheaply, quickly and efficiently.

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# What can I do to promote the recognition of open learning?

#### YOU CAN...



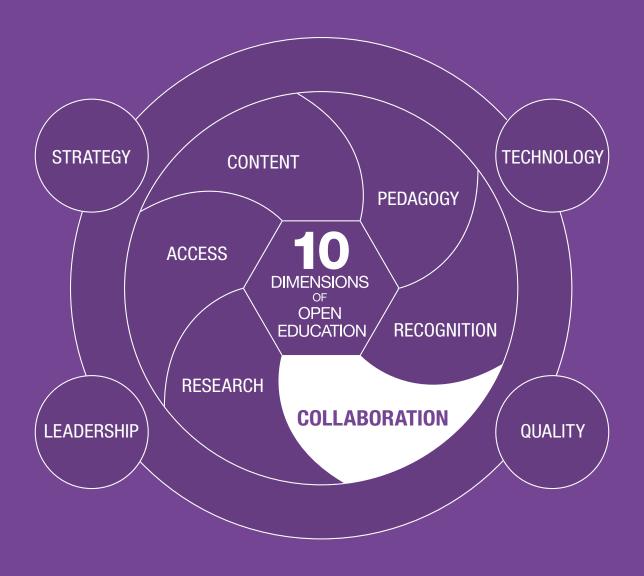
take the initiative of mapping your course syllabus against those of other HE institutions that you wish to collaborate with in order to facilitate the recognition of open learning and content reuse.

support your institution in the process of enabling learners to make the transition from non-formal to formal education whenever they want, by discussing and agreeing on fast-track recognition policies with colleagues from your institution and from abroad.

support your institution in offering open learning, issuing open learning certificates and recognising certificates and credentials issued by third party institutions. Open learning certificates and credits can be more easily recognised by third parties if robust assessment practices are carried out, particularly when that assessment leads to formal certification.

European Union, 2019





# Collaboration

**Involving Different Stakeholders** 





# Collaboration **Involving Different Stakeholders**



#### Collaboration in open education

Collaboration is about facilitating the exchange of practices and resources, as well as the co-sharing of strategies and initiatives, with a view to improving teaching, learning, education services and research. This is done by promoting awareness-raising activities, creating networks between institutions, communities and learners, and by agreements that support open educational practices at various levels: between individuals, regional and national institutions, and internationally. Different stakeholders (e.g. ministries, institutions and teachers) can collaborate in open education in order to promote awareness raising and to share practices.

#### Benefits of collaborating in open education

Collaboration in open education promotes the exchange of knowledge, co-production of OER and courses, co-offering of open online courses and MOOCs, co-certification and fast track recognition, the development of open digital learning environments and digital competences, among many other possibilities. It can also enhance cost-effectiveness.

For **academics**, collaboration in open educational practices enables them to co-develop and share courses, curricula and resources, therefore creating opportunities for more cost- and time-effective academic practices. It also leads to continuous professional development since academics can learn from one another.

**Learners** become empowered in their lifelong learning by collaborating with peer-learners, academics and institutions in the co-design of their individual learning paths, and also in their learning process, such as in collaborative course activities.

**Institutions** are able to improve the efficiency of their various academics services when these are provided in collaboration with other institutions. They can also benefit from the creation of fast-track routes for the recognition of diplomas and certificates, thus reducing costs and offering leaners more tailored services. Collaboration with national ministries can bring about support for innovation.

**Society** benefits from the knowledge that is collaboratively created and shared among different actors, such as institutions' academics and the learners themselves.



#### Challenges to collaborating in open education

For **academics** the challenge is to find a network for the purpose of collaboration, because that requires time and effort. Often academics find that they are short of time given their numerous responsibilities, and that their institutions offer no official incentives to establish collaboration channels with other institutions. In such cases it is also possible that the collaboration established between academics may not even be recognised by the institutions and does not enter into the criteria for ranking schemes or, therefore, have a positive impact on career progress.

**Learners** need to be proactive in seeking opportunities for collaboration in open education, which includes reaching out to communities of practice that may not be hosted by the education institution in which the (non-formal) open learning is being carried out.

**Institutions** should seek to form partnerships with a variety of stakeholders in order to collaborate on open

educational practices - such as other national and international higher education institutions as well as national ministries, quality assurance agencies, regional governments, NGOs and businesses. Businesses are particularly important in helping to raise awareness of the value of open learning diplomas and certificates in the job market. Forging such collaboration requires the HEIs to be proactive and to have a strategic roadmap laying out goals and challenges.

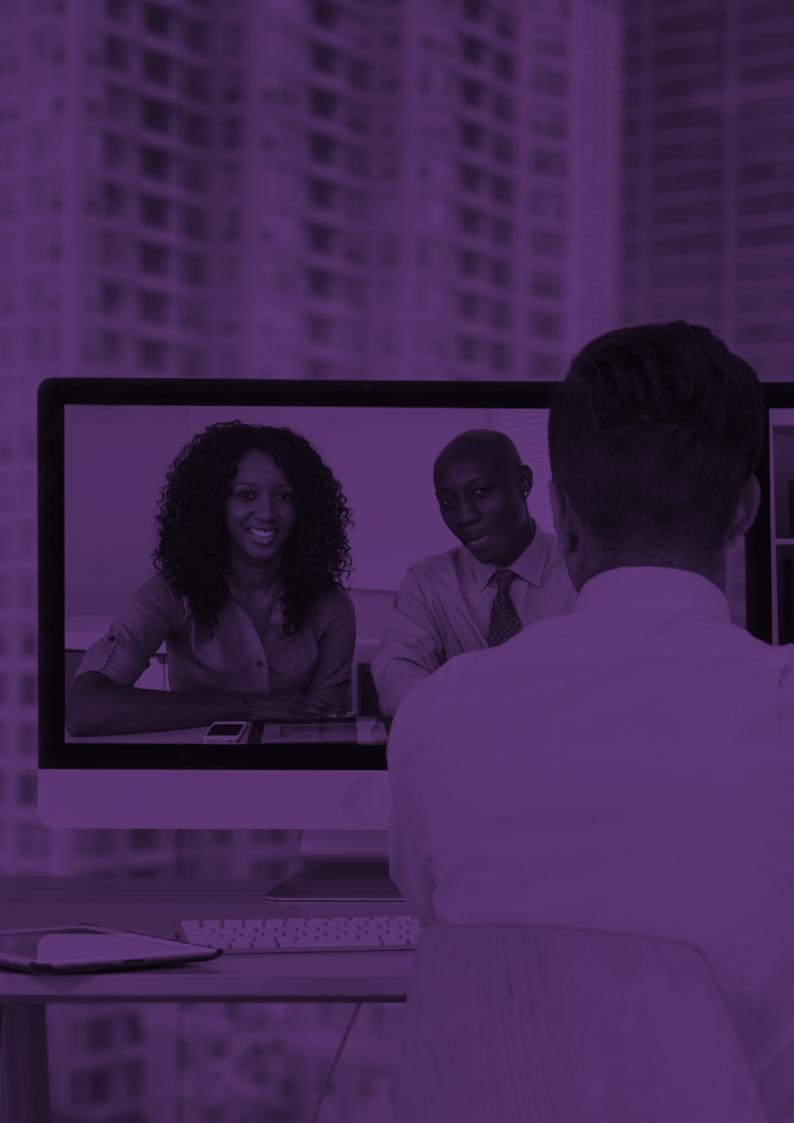
**Society** is faced with the challenge of achieving a mindset shift towards collaborating cross-sector in order to reach open-education goals such as inclusiveness and new job market opportunities. In an open learning scenario, 'learning' can take place in a number of environments, not only in a school or university. Efforts should be made to be open to accepting and valuing certificates derived from open learning experiences, and at the same time to create opportunities for this to happen.





### Statements for self-reflection

1. I collaborate with other educators in the exchange of open educational practices and open educational resources.	<b>Peer collaboration:</b> You understand the value of collaborating with your peers and seek to establish a network of academics with whom to collaborate in the sharing of open educational practices and resources.
2. I open my teaching, content and research to the world in order to create opportunities for collaboration.	Open collaboration: You are open to collaborating with parties that are not in your immediate professional circle and, in order to do that, you open up access to your courses, content, research and activities to learners and interested parties. You know that by opening up your resources and teaching approaches to others you are amplifying your scope of action and influence, and at the same time creating opportunities to be contacted by individuals and organisations that share similar interests.
3. I want my institution to actively promote collaboration in open educational practices through a multi-stakeholder approach: intra-institutional collaboration, inter- institutional collaboration, cross-border collaboration between HEIs, and collaboration beyond academia.	Institutional engagement:  You aim for collaboration to take place in three ways: intra-institutionally (between academics of your own institution), inter-institutionally (between institutions and academics of your region or country) and cross-border (between academics of your own institution and those in institutions abroad). You also want your institution to collaborate with stakeholders beyond academia, such as ministries, regional governments, NGOs and employers.



### Collaboration

#### Involving different stakeholders

Collaboration in open education is about facilitating the exchange of practices, and resources, as well as the co-sharing of strategies and initiatives, with a view to improving teaching, learning, education services and research.







**Academics** can co-develop and share courses, curricula and resources, therefore creating opportunities for more cost and time-effective academic practices. It also leads to continuous professional development since academics can learn from one another.







**Learners** become empowered in their lifelong learning by collaborating with peer-learners, academics and institutions in the co-design of their individual learning paths, and also in their learning process, such as in collaborative course activities.







**Institutions** are able to improve the efficiency of their various academics services when these are provided in collaboration with other institutions. They can also benefit from the creation of fast-track routes for the recognition of diplomas and certificates, thus reducing costs and offering leaners more tailored services. Collaboration with national ministries can bring about support for innovation.



**Society** benefits from the knowledge that is collaboratively created and shared among different actors, such as institutions' academics and the learners themselves.



#### What can I do to promote collaboration in open education?

#### YOU CAN...



#### establish a network of academics

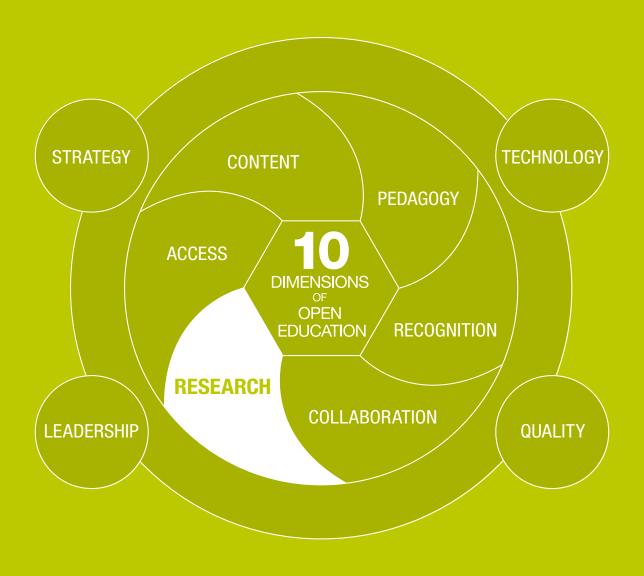
with whom to collaborate in the sharing of open educational practices and resources because you understand the value of collaborating with your peers.

embrace open collaboration, thus being open to collaborating with parties that are not in your immediate professional circle. In order to do that, you open up access to your courses, content, research and activities to learners and interested parties.

#### aim for collaboration to take place

**in three ways:** intra-institutionally (between academics of your own institution). inter-institutionally (between institutions and academics of your region or country) and crossborder (between academics of your own institution and those in institutions abroad). You also encourage your institution to collaborate with stakeholders beyond academia, such as ministries, regional governments, NGOs and employers.





# Research

Open Science, Open Access and Open Data





# Research Open Science, Open Access and Open Data



#### What is openness in research?

Openness in research is about removing barriers to accessing data and research outputs, and also about widening participation in research processes, thus embracing the open science approach. Open science is an approach to scientific processes based on cooperation and new ways of disseminating scientific knowledge by using digital technologies and collaborative tools. It includes open access, open data, open research processes, and open science policies and tools. Open access is about online access, free of charge, to peer-reviewed scientific content with limited copyright and licensing restrictions. Open data refers to data that can be used free of charge, reused and redistributed, subject only to the requirements of its open licence.

#### Benefits of openness in research

**Academics** benefit from open science because their scientific production can be available to larger groups of readers and their work will thus gain more visibility. They can also benefit from open science activities, both as project participants and as commentators on research, because extended networks provide a larger pool of expertise. Richer data sets are also available to academics, without restrictions.

Learners are able to examine and handle data at the various stages of data collection and analysis, and can use open access research to enrich their study materials.

**Institutions** benefit from promoting open research through their academic staff. Their intellectual output reaches a wider audience, thus enhancing the institution's reputation. There is also more collaboration in relation to open data, which can lead to richer outputs.

**Society** benefits from increased access to scientific publications, because when these are published with open access they can be used by a wider audience beyond academics and scientists. Access to open data can lead individuals to be more active in citizens' science, a form of research in which professional scientists engage with members of the public for research collaboration. This has the potential to make research processes more participatory and at the same time more accessible to all.



#### Challenges to openness in research

For **academics**, the main challenge is to develop a culture of prioritising research publications in open access journals rather than in journals that have high impact but no open access policy. Academics are often challenged by the 'publish or perish' approach in higher education institutions, meaning that they are frequently required to publish in ISIlisted (international scientific indexing) journals that tend to be non-open publications. In terms of research data, in order not to infringe GDPR and other research ethics principles, it is also important to understand possible restrictions that might mean certain data sets are not openly available.

**Learners** need to learn how to discriminate between quality open access research publications and general, self-published, non-peer reviewed articles that they find on the internet.

**Institutions** should liaise with ministries and funding bodies to rethink how funding is channelled towards the institutions. Often, one of the assessment criteria for eligibility for specific funding is the number of pieces academics get published in high-impact-factor journals. Therefore institutions need to rethink their academics' career paths, particularly if progress can only be made when publishing in high-impact-factor journals, as this would tend to discourage academics from publishing in open access journals that do not yet have a high impact factor. Institutions should develop policies that emphasise the importance of releasing scientific publications and data as open science.

**Society** is challenged by the exposure to data and research outcomes that previously were restricted mostly to scientists. It will require capacity building for individuals to better understand these data and research processes. in order to avoid misconceptions when exposed to these data/publications and to be able to distinguish between real and fake science.



### **Statements for self-reflection**



1. I choose to publish my research in open access journals.	Publishing in open access journals  You can identify open access journals and understand the different routes to publication: green and gold. The green route means that you publish in a subscription journal and deposit the final accepted version of your paper (post-print) in an institutional repository. The paper will be openly available, usually after an embargo period. This route often requires no fees to be paid to the publishers. The gold route, however, requires a fee to be paid to the publisher, normally called an 'article processing charge' (APC). The paper will immediately be openly available, with no embargo period.
2. I make my research data available as open data.	Making data available as open data  You can explore whether the data you collect or handle can be made publicly available as open data. In order to do so you should check ethics guidelines, GDPR and other regulatory frameworks for data protection and sensitivity awareness. If and when there is clearance, you can find the best mechanisms to make the data publicly available and at the same time apply a strategy to disseminate it to communities that may be interested.
3. I support my institution in the design of and compliance with policies that promote and/or reward academics who embrace open research practices.	Institutional engagement: policies supporting open research practices  You can act as an ambassador for open research practices in your institution. Leading by example, you provide guidance to colleagues who would like to know more about open access to research publications and data. You also bring your experience to the attention of institutional decision makers, with the aim of helping them provide appropriate support for open research practices.
4. I aim for principles of open research and collaboration to be applied in all research projects I am involved with, whenever appropriate and feasible.	Institutional engagement: open research and collaboration You can seek to engage your institution and colleagues in open research methods and collaboration in open data and citizens' science. You can try to keep track of the best technologies for sharing research data and outputs, both during the research period and after the project's publication and finalisation, and seek to promote quality open science.



### Research

# Open Science, Open Access and Open Data

Openness in research is about removing barriers to accessing data and research outputs, and also about widening participation in research processes, thus embracing the open science, open access and open data approaches.







**Academics** make their scientific production available to larger groups of readers, and their work gains more visibility.







**Learners** are able to examine and handle data at the various stages of data collection and analysis, and can use open access research to enrich their study materials.



**Institutions** increase their reputation by promoting open research through their academic staff.



**Society** benefits from increased access to scientific publications, because when these are published with *open access* they can be used by a wider audience beyond academics and scientists.



# What can I do to promote access to educational opportunities?

#### YOU CAN...



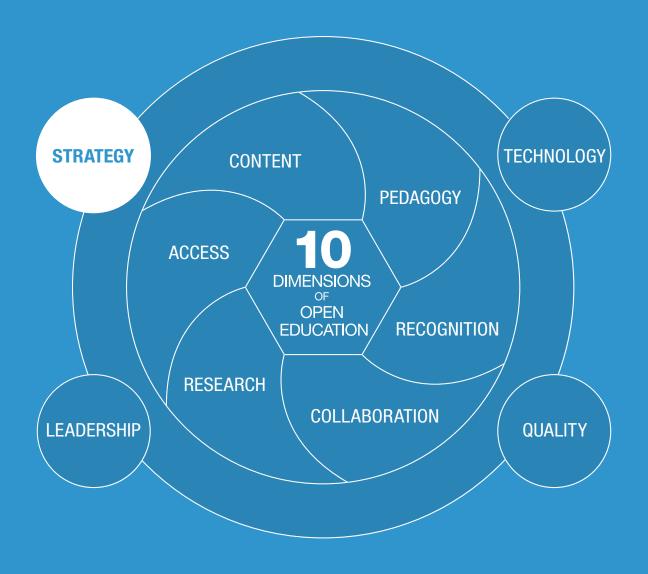
explore whether the data you collect or handle can be made publicly available as open data. In order to do so you should check ethics guidelines, GDPR and other regulatory frameworks for data protection and sensitivity awareness.

seek to engage your institution and colleagues in open research methods and collaboration in open data and citizens' science. You can try to keep track of the best technologies for sharing research data and outputs, both during the research period and after the project's publication and finalisation, and seek to promote quality open science.

identify open access journals and understand the different routes to publication: green and gold. The green route means that you publish in a subscription journal and deposit the final accepted version of your paper (post-print) in an institutional repository. The paper will be openly available. usually after an embargo period. This route often requires no fees to be paid to the publishers. The gold route, however, requires a fee to be paid to the publisher, normally called an 'article processing charge' (APC). The paper will immediately be openly available, with no embargo period.

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# Strategy

Integrating Open Education Practices into Core Activities





## Strategy **Integrating Open Education Practices** into Core Activities



#### What does it mean to have a strategy for open education?

Having a strategy for open education means creating a unique and valuable position on openness involving different sets of activities. The HEI (institutional) strategy on open education should make an explicit commitment to the integration of open education practices (OEP) as an enabler of its vision and mission for development, modernisation and transformation of (1) academic programmes, (2) outreach, access and flexibility, and (3) research. This commitment should be visible in the strategic implementation plan, in terms of specific and measurable actions.

#### Benefits of a strategy for openness

**Academics** benefit from an institutional strategy which promotes increased opportunities for collaboration with colleagues from other departments, other institutions and other countries. They also benefit from strategies that will enable them to become more visible to a wider audience, such as by having support in creating online courses (e.g. MOOCs), video lectures, OER, open pedagogies, open access research, and open data practices. They also benefit from trying out new teaching practices, often using digital technologies.

**Learners** benefit from having clear and more flexible paths to bridging non-formal and formal learning via HEIs, from a learner-centred approach to teaching and learning, from access to a variety of content and courses from national and HEIs from abroad, as well as the possibility to use OER, open data and open access research in their studies. For **institutions**, the benefit of having a strategy for opening up education is that a clear roadmap of the starting point and the goal is set out, also contributing to a shift in mindset towards openness. The OpenEdu Project research shows that HEIs with a clear strategy for open education, communicated to all staff members, tend to be more successful in implementing open educational practices than HEIs that lack such a strategy.

**Society** benefits when HEIs have a strategy of acting both locally and globally, as people are able to participate in courses, gain certification, and upskill and re-skill whenever they need to.



#### Challenges in designing and supporting a strategy for institutional openness

For **academics** the main challenge is to reflect upon how the institutional strategy for opening up education applies to their own practices, and to start making the necessary changes. These require from academics a commitment to the open education agenda and its principles. The strategy starts with the individual but is most effective when implemented in teams and/or at the level of concerted action on the part of a whole academic department.

**Learners** are challenged with the need to have their own strategy, for example in order to establish a personal learning pathway where open education plays a role in their pursuit of continuous professional and personal development. They are faced with the need to devise their own personal strategies to increase study discipline, perseverance and the commitment to explore the possible routes that open learning practices make available to them for the achievement of the desired learning outcomes.

**Institutions** face the challenge of creating a strategy for opening up education which enhances the conceptual, operational and financial aspects of the educational offer. The strategy should be fully integrated with the HEIs' activities and at the same time aligned with the institutional mission and strategy. They are also challenged to find business models that would enable them to truly embrace open education practices. For example, by having a strategy for OER, MOOCs, free and open online courses, as well as recognition of non-formal learning procedures, HEIs often benefit from a greater number of formal registrations and gain an enhanced reputation and wider reach. These also help HEIs meet their social mission with regard to widening access and providing a knowledge service to the community, and contribute to their internationalisation.

**Society** faces the challenge of how to get different stakeholders (e.g. businesses, employers, parents, NGOs) both to support and benefit from higher education institutions' strategies for open education.







1. I create a strategy for opening up education in my own courses and research projects.	<b>Being a strategic open academic</b> You can design a strategy for open education for your own practice, both for teaching and research. You cover as many <u>dimensions of open education</u> as possible in your strategy, in order to have a holistic approach to opening up education. Alternatively, you can choose which aspects are more relevant for your own context as a teacher and/or researcher.
2. I support my institution in the design of strategies and policies for open education based on my own practice.	Institutional engagement: supporting policies for open education practices  You can be an ambassador for open education practices and play an important role in strategy design and institutional policy design. Even if you are not responsible for institutional strategy and policy design, you contribute by 'leading by example', at the same time striving to find routes to make the overall education offer of your institution more open, diverse and flexible.
3. I aim for my institution to have a clear and transparent strategy and roadmap on open education, aligned with its mission.	Institutional engagement: roadmap for open education and transparent policies  You aim for your institution to be engaged with open education in ways that go beyond a specific or localised action, to embrace a full strategy and roadmap for a holistic approach to open education. You know the importance of ensuring these open education policies are well advertised and making them available to the academics and students, as well as to open and lifelong learners.



### Strategy

#### **Integrating Open Education Practices into Core Activities**

Having a strategy for open education means creating a unique and valuable position on openness involving different sets of activities. The higher education institution's strategy on open education should contain measurable actions and make an explicit commitment to the integration of open education practices (OEP) as an enabler of its vision and mission for development. modernisation and transformation of (1) academic programmes, (2) outreach, access and flexibility, and (3) research.



**Academics** benefit from an institutional strategy which promotes increased opportunities for collaboration with colleagues and enables visibility to a wider audience. They also benefit from having support and infrastructure to embrace OEP.







**Learners** benefit from having clear and more flexible paths to bridging non-formal and formal learning via higher education institutions, from a learner-centred approach to teaching and learning, from access to a variety of content and courses, as well as the possibility to use OER, open data and open access research in their studies.



**Institutions** benefit from having a strategy for opening up education that is a clear roadmap of the starting point and the goal to be achieved, also contributing to a shift in mindset towards openness. The OpenEdu Project presents ideas for the design of open education practices.



**Society** benefits when HEIs have a strategy of acting both locally and globally, as people are able to participate in courses, gain certification, and upskill and re-skill whenever they need to.

### What can I do to help my institution design and implement a strategy for open education practices?

YOU CAN...



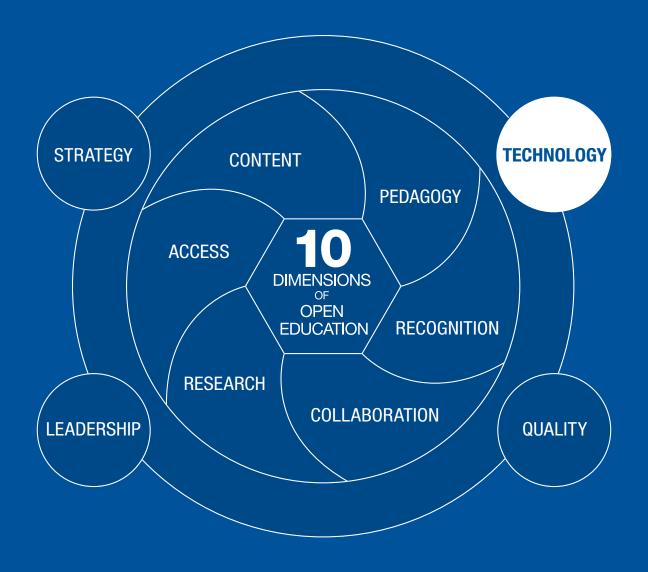
design a strategy for open education for your own practice, both for teaching and research. You can cover as many dimensions of open education as possible in your strategy, in order to have a holistic approach to opening up education. Alternatively, you can choose which aspects are more relevant for your own context as a teacher and/or researcher.

support your institution implementing OER practices, by embracing OER use yourself at the same time helping your colleagues and learners to understand OER principles and licenses.

be an ambassador for open education practices and play an important role in strategy design and institutional policy design.

Even if you are not responsible for institutional strategy and policy design, you contribute by 'leading by example', at the same time striving to find routes to make the overall education offer of your institution more open, diverse and flexible.





# Technology

Free Open Source Software and Open Document Standards





## **Technology** Free Open Source Software and Open Document Standards



#### What role do open source technology and open document standards have in open education?

Technology in open education is approached as free and open software and standards which facilitate open educational practices. Technology works as an enabler of all the other dimensions of openness when based on open standards and open source technologies which are interoperable with other platforms and services. Open document standards refer to software norms which give users the permission to create copy and to distribute and use documents freely or at low cost. These standards must be documented, publicly available and free to use. Open document standards must also be compatible with both open source and proprietary licensed solutions. Free and open source technologies (FOSS) are software which are free of charge, and the source code used to create the program is also made available free of charge to view, edit and redistribute. This open source software is usually developed and maintained via the collaboration of different stakeholders, including the general public.

#### Benefits of using open source technology and open document standards in open education

**Academics** benefit from using open source software because this type of software is free of charge and has an ongoing development and support system provided by the community of developers and users that is generated around it. These technologies also tend to be interoperable with one another, which enables academics to share their content and download content from their peers for use and remix more easily. Complementary to the use of FOSS, the option for open document standards (or formats) facilitates the reusability of the OER, because the documents can be

read by both proprietary (e.g. Microsoft Word) and nonproprietary (e.g. Open Office) licensed solutions.

**Learners** benefit from the courses and content available via digital means (e.g. in repositories and platforms), and the new ways of studying which these technologies make possible (e.g. MOOCs and video lectures). They can study with no geographical boundaries, in their own time and at their own pace.



**Institutions** benefit from using open standards and open source technologies because they improve flexibility and ability to collaborate with other organisations, at the same time keeping costs sustainable. Open source technologies and open standards also help institutions avoid vendor lock-in to a specific technology supplier.

**Society** benefits from open standards due to being able to freely use the documents (open document standard - .odt extension) and also from sharing it between services and systems. An example of open standards is the Open Office software. Society also benefits from free and open source software (FOSS) due to better use of public money, since the software is not proprietary and can be upgraded and modified by a public community of collaborators.

#### Challenges of open source technology and open standards for openness

For **academics**, the main challenge is to know how to identify and use FOSS technologies and open document standards (.odt extension) for the benefit of learners and themselves.

**Learners** need to know how to use and benefit from digital technologies for learning. They also need to identify the affordances of the different types of technologies for their own learning goals and understand the way they share their data in such platforms (e.g. social media, MOOC platforms, OER repositories, virtual learning environments, games etc.). DigComp (digital competence framework for citizens) can be helpful for learners to help them assess their competences and identify gaps.

**Institutions** need to be prepared to tap into the affordances of open source technology and open document standards in open education. Decisions on best technologies for open education services need to be made in alignment with the concept of openness, that is, open document standards and open source technologies, which enable collaboration in terms of software development and improvement, as well as reducing costs.

Society needs to understand the benefits of using open source software and open document standards in education to make better use of public money. Society also needs to promote a bottom-up approach to raising awareness about FOSS and open document standards in open educational practices.



### **Statements for self-reflection**



1. I understand and use free and open source software (FOSS) as well as open document standards in my teaching.	Being a user of FOSS and open document standards  You can use free and open source software (FOSS) to create, reuse, publish and share open educational resources. You also use open document standards (.odt extensions) to create and share your open educational resources. In addition, you know how to choose and use the appropriate FOSS to support your teaching approaches, both for classroom-based and distance-education courses.
2. I explore the options for free and open source software (FOSS) use in my teaching.	Remaining up to date  You explore the use of different FOSS in your teaching in order to remain open and up to date with technological developments, therefore operating beyond your comfort zone whenever possible.
3. I teach my students the benefits of open source technologies and open document standards in education, and encourage their use.	Propagating good practice You take the time to explain to your students why you and/or your institution opt for open source technologies over proprietary ones. You encourage them to use these technologies for accessing and sharing course materials, and make them aware that they can also be content producers.
4. I engage with my institution in developing a strategy for the uptake and mainstreaming of open source technologies and open standards.	Institutional engagement: supporting policies for open source technologies and open document standards  You are an ambassador for open standards and free and open source technologies in your institution, helping your hierarchy and your colleagues in choosing, assessing and using them.



## Technology

# Free Open Source Software and Open Document Standards

Technology in open education is approached as free and open source software (FOSS) and standards which facilitate open educational practices. Technology works as an enabler of all the other dimensions of openness when based on open standards and open source technologies which are interoperable with other platforms and services.



**Academics** benefit from using free and open source software because these technologies tend to be interoperable with one another, which enables academics to share their content and download content from their peers for use and remix more easily.



**Learners** benefit from the courses and content available via free and open digital technologies (e.g. in repositories and platforms), and the new ways of studying which these technologies make possible (e.g. MOOCs and video lectures). They can study at a lower or no cost, with no geographical boundaries or time constraints.





**Institutions** benefit from using open standards and open source technologies because they improve flexibility and ability to collaborate with other organisations, at the same time keeping costs sustainable. Open source technologies and open standards also help institutions avoid vendor lock-in to a specific technology supplier.



**Society** benefits from free and open source software due to the ability to freely create, use and share documents with open standards, and from better use of public money since the software is not proprietary.

# What can I do to help my institution embrace FOSS and open document standards?

#### YOU CAN...



take the time to explain to
your students why you and/or
your institution for open source
technologies over proprietary ones.
You encourage them to use these
technologies for accessing and sharing
course materials, and make them
aware that they can also be content
producers.

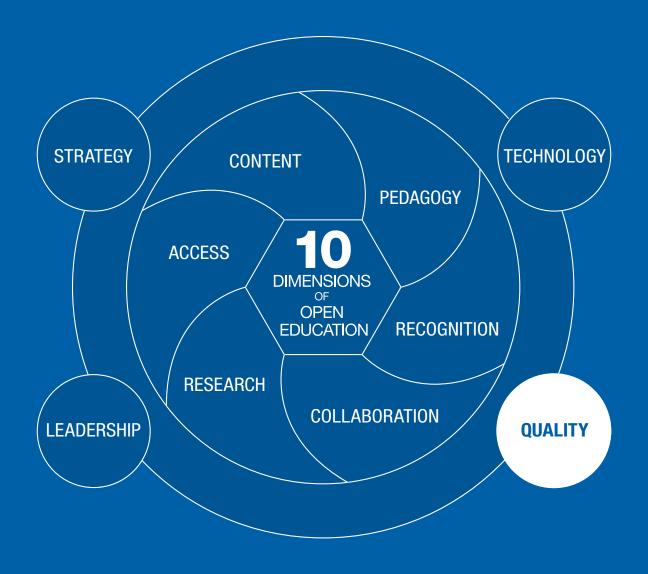
#### explore the use of different FOSS

in your teaching in order to remain open and up to date with technological developments, therefore operating beyond your comfort zone whenever possible. **use free and open source software (FOSS)** to create, reuse, publish and share open educational resources. You also use open document standards (.odt extensions) to create and share your open educational resources.

be an ambassador for open standards and free and open source technologies in your institution, helping your hierarchy and your colleagues in choosing, assessing and using them.

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# Quality

Objectives, Standards and Procedures





# Quality Objectives, Standards and Procedures



#### How can quality be achieved in open education practices?

Institutions are responsible for defining and meeting their own quality objectives, practices and standards in open education. In other words, HEIs are responsible for defining and meeting quality objectives for the analysis and strategic planning of open educational practices, quality standards for the design and implementation of these practices, and quality procedures for their realisation and evaluation. Quality standards should cover all levels of open education: 1) Open educational resources and courses (curriculum design, course design, and course delivery), 2) Open educational services (staff support, students support) and 3) Open education management (strategic planning and development) and societal contributions. Institutions can develop their own quality objectives, standards and procedures for open education, or <u>adapt existing ones</u> used for general e-learning and distance education to ensure quality in open educational practices.

#### Benefits of having your own quality objectives, standards and procedures in open educational practices

**Academics** benefit from clear quality objectives, standards and procedures because they can apply them in designing and continuously improving open educational practices, at the same time that their open education practices are recognised as education that meets quality standards, therefore gaining further credibility.

Learners benefit from the assurance that open educational resources and open courses are reliable and credible.

**Institutions** benefit from defining and following their own quality objectives, standards and procedures for open education in order to achieve high quality and offer a reliable alternative education system, complementary to existing traditional education offers and systems.

Society benefits from having access to credible open educational resources, courses and practices that are cheap or free of charge, accessible anytime and anywhere, and bridge formal and non-formal education.



#### Challenges of quality objectives, standards and procedures in open education practices

For academics, the challenges of meeting quality objectives, standards and procedures for open education practices are similar to the ones they already face on a dayto-day basis. These relate to having technical knowledge, teaching and delivery skills, digital competences, and being good at interpersonal relations such as engaging in collaboration with others.

**Learners** have the challenge of identifying good open education offers. They need to be able to find reliable sources of information as well as to identify high-quality open educational resources, courses and practices.

**Institutions** should ensure that their open educational resources, courses and practices meet similar quality standards to those of other education offers and systems.

**Society** needs to ensure that social recognition can be granted to open education achievements, because with quality standards and procedures in place, open education offers are comparable to those in formal education systems.



### Statements for self-reflection



1. I know what quality objectives have been set for my open education practices in my institution, and I know how to follow them.	<b>Understanding quality objectives for open education</b> You seek to understand your institution's quality objectives for your open education practices. And if those objectives are not clear, you proactively discuss them within your institution so as to improve them.
2. I know what quality standards and procedures are required for my open education practices in my institution.	Understanding quality standards and procedures for open education  You proactively seek to understand the quality standards required by your institution for your open education practices, and the procedures to achieve them. For example, you might like to enquire whether a non-professionally recorded video can be released as an OER, or whether the institution would offer you professional recording and editing services. Just be sure of your institution's quality standards and procedures when it comes to producing learning materials for open education, which can be more or less resource-supported.
3. I (re-)use the open educational materials that I create (also with my own learners), and seek to improve both my materials and my teaching approach on the basis of the feedback I receive.	Improved quality of open teaching materials and approaches You seek to improve teaching materials and to refine your teaching approach when you receive feedback from your learners and from your collaborators in the open education world.
4. I support and engage with my institution in the setting of quality objectives, procedures and standards for open education practices.	Institutional engagement: quality objectives, standards and procedures for open education practices  You are an ambassador for quality objectives, standards and procedures in open education at your institution because you know that quality is essential for reliability and credibility. Therefore you act proactively alongside your colleagues in setting and adapting quality objectives, sharing ideas and roadmaps for quality checks, and pursuing and evaluating quality standards and procedures for open education practices.



## Quality

#### Objectives, Standards and Procedures

Institutions can develop their own quality objectives, standards and procedures for open education, or adapt existing ones used for general e-learning and distance education to ensure quality in open educational practices. Quality standards should cover all levels of open education: 1) Open educational resources and courses (curriculum design, course design, and course delivery), 2) Open educational services (staff support, students support) and 3) Open education management (strategic planning and development) and societal contributions.





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**Learners** benefit from the assurance that open

educational resources and open courses are reliable









and credible.







**Society** benefits from having access to credible open educational resources, courses and practices that are cheap or free of charge, accessible anytime and anywhere, and bridge formal and non-formal education.



#### What can I do to help my institution set and achieve quality objectives?

YOU CAN...



learn about your institution's quality objectives for your open ed t clear, you can proactively discuss them within your institution so as to improve them.

improve teaching materials and to refine your teaching approach when you receive feedback from your learners and from your collaborators in the open education world.

be an ambassador for quality **objectives**, standards and procedures in open education at your institution because you know that quality is essential for reliability and credibility. Therefore you can act proactively alongside your colleagues in setting and adapting quality objectives, sharing ideas and roadmaps for quality checks, and pursuing and evaluating quality standards and procedures for open education practices.





# Leadership

Top-Down and Bottom-Up





# Leadership Top-Down and Bottom-Up



#### What does leadership mean in open education?

Leadership in open education is the promotion of open educational practices using transparent approaches, at the same time turning these practices into institutional policies. These open educational practices should be prompted both from the top down (from university managers to the staff and learners) and from the bottom up (from the staff and learners to the university management), and from society whenever possible. Leadership paves the way to creating more openness by inspiring and empowering people. It goes beyond the creation of strategies decided at the executive level. Above all it means identifying ambassadors for open education, at all levels, who will take the lead in the different strands of open education in the institution. Leadership in open education, also called open leadership, should be performed in a way that promotes take-up by a range of stakeholders, including learners, across the higher education institution.

#### Benefits of leadership for openness

**Academics** benefit from being advocates of open education because of the opportunities arising from open educational practices: increased contact with peers, inside and outside the institution, for collaboration purposes; the chance to shape the strategy design for open education at an institutional level; and the increased networking opportunities that arise from being an ambassador.

Learners can also perform a leadership role in open education, particularly in their student group, families and communities. They can be ambassadors for open education and thereby become more engaged with social issues such as inclusivity in education.

**Institutions** can empower their staff and learners in the uptake of open educational practices while at the same time becoming empowered themselves through the various initiatives that can be carried out in the pursuit of openness, thereby fulfilling the institutions' social missions.

Society benefits from the leadership role of open education ambassadors all over the world, who spread the word about the potential of open education for increased social inclusion, and about access to learning opportunities via non-formal routes.



#### Challenges of leaderhsip for openness

For academics, being an open education ambassador requires support and recognition, and these need to be negotiated with their higher education institution.

**Learners** as open education leaders are required to have significant knowledge of the various ways in which open education practices can be carried out, and of the role of higher education institutions and other stakeholders in supporting these practices. They need to be proactive in learning how to become ambassadors for open and lifelong learning.

**Institutions** face the challenge of assuming a leadership role which allows and encourages bottom-up initiatives, not only top-down ones. Preferably they should aim for the academics, staff and students to have greater ownership of the intuitions' open education practices than the management does.

Society needs to understand and recognise that every individual has a role in fostering open education practices, which means more awareness-raising activities are necessary.





### Statements for self-reflection

1. I support my institutions in the design of strategies and policies for open education.    No	Institutional engagement: supporting policies for open education practices  You can be an ambassador for open education practices and play an important role in strategy design and institutional policy design. Even if you are not responsible for institutional strategy and policy design, you can contribute by 'leading by example', at the same time striving to find routes to make the overall education offer of your institution more open, diverse and flexible.
2. I create a strategy for opening up education in my own courses and research projects.	<b>Being a strategic open academic</b> You can design a strategy on open education for your own practice, both for teaching and research. You can try to cover as many <u>dimensions of open education</u> as possible in your strategy in order to have a holistic approach to opening up education.
3. I aim for my institution to have a clear and transparent strategy and roadmap on open education, aligned with its mission.	Institutional engagement: roadmap for open education and transparent policies  You can aim for your institution to be engaged with open education in ways that go beyond a specific or localised action, to embrace a full strategy and roadmap for a holistic approach to open education. You know the importance of ensuring that these open education policies are well advertised and available to the academics and students, as well as to open and lifelong learners.



## Leadership

### Top-down and bottom-up

Leadership in open education is the promotion of open educational practices using transparent approaches, at the same time turning these practices into institutional policies. These open educational practices should be prompted both from the top down (from university managers to the staff and learners) and from the bottom up (from the staff and learners to the university management), and from society whenever possible.



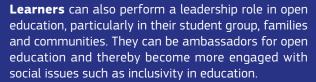


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**Society** benefits from the leadership role of open education ambassadors all over the world, who spread the word about the potential of open education for increased social inclusion, and about access to learning opportunities via non-formal routes.



# What can I do to help my institution embrace open education practices?

YOU CAN...



be an ambassador for open education practices and play an important role in strategy design and institutional policy design. Even if you are not responsible for institutional strategy and policy design, you can contribute by 'leading by example', at the same time striving to find routes to make the overall education offer of your institution more open, diverse and flexible.

#### design a strategy on open education

for your own practice, both for teaching and research. You can try to cover as many <u>dimensions of open education</u> as possible in your strategy in order to have a holistic approach to opening up education.

aim for your institution to be engaged with open education in ways that go beyond a specific or localised action, to embrace a full strategy and roadmap for a holistic approach to open education. You know the importance of ensuring that these open education policies are well advertised and available to the academics and students, as well as to open and lifelong learners.

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doi:10.2760/55923 ISBN 978-92-76-00194-2



