Research in Learning Technology
Vol. 32, 2024

ASSOCIATION FOR LEARNING TECHNOLOGY ALT

ORIGINAL RESEARCH ARTICLE

Impact and implementation of UNESCO's Recommendation on Open Educational Resources in academic libraries: SPARC Europe Case Study

Gema Santos-Hermosa*

School of Information and Audiovisual Media, University of Barcelona, Barcelona, Spain

(Received: 7 September 2023; Revised: 29 December 2023; Accepted: 29 February 2024; Published: 23 May 2024)

This paper analyses the role of libraries in the development of Open Educational Resources (OER) and, more specifically, the impact and level of implementation of UNESCO's (2019) OER Recommendation in Higher Education libraries. This study, the result of a joint undertaking between a national R&D project and SPARC Europe, is based on an online survey, disseminated amongst the European Network of Open Education Librarians (ENOEL) and uses a descriptive research methodology. The results highlight the implementation actions being taken by university libraries (n = 136) in each of the five areas of action of UNESCO's Recommendation. We find that the main contributions are being made in the areas of capacity building and Open Education policies, but that considerable work has yet to be done in terms of promoting inclusiveness and the sustainability of OER. Thus, the full implementation of UNESCO's recommendation requires a greater commitment on the part of librarians to joint actions undertaken via international networks and projects, as well as greater institutional commitment and the building of interdepartmental alliances.

Keywords: Academic Libraries; Open Educational Resources (OER); Open Education; UNESCO's OER Recommendation; Europe

Introduction

This paper examines the current impact and level of implementation of Open Educational Resources (OER) in European academic libraries based on the UNESCO (2019) Recommendation on OER (hereinafter, OER Recommendation) and its five areas of action.

Drawing on the OER Recommendation and innovative experiences emerging worldwide, the aim of this study is to collect information about the work being undertaken by academic librarians to implement OER. This study forms part of a broader research project in relation to Open Science (OS) in Spain and the results of a knowledge transfer project focused on Open Education (OE) conducted by SPARC (Scholarly Publishing and Academic Resources Coalition) Europe, which have already generated a series of initial outcomes summarised in a comprehensive report dedicated to OE (Santos-Hermosa, Proudman & Corti, 2022).

*Corresponding author. Email: gsantos@ub.edu

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

OE and OER are fully aligned with the fourth sustainable development goal of the United Nations 2030 Agenda to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Later, the 2017 OER Global Report and the 2017 Ljubljana OER Action Plan laid the foundations for initiating actions and strategies to harness the potential of OER. More recently, the OER Recommendation – adopted unanimously by UNESCO's General Conference at its 40th session – is the first international normative instrument to embrace the field of openly licenced educational materials. The OER Recommendation aims to assist UN Member States at the national level by supporting the creation, use and adaptation of inclusive and quality OER and facilitating international cooperation in this field through five areas of action: (1) building the capacity of stakeholders to create, access, re-use, adapt and redistribute OER, (2) developing supportive policy, (3) encouraging inclusive and equitable access to quality OER, (4) nurturing the creation of sustainability models for OER and (5) facilitating international cooperation (UNESCO, 2019).

These initiatives have played a critical role in strengthening action plans to include access to OER. However, the different agents involved are essential to guarantee its implementation in opening up education. To this end, UNESCO's International Commission on the Futures of Education specifically identifies *libraries* as one of the key stakeholders:

> Higher education has a key role to play in building education as a global common good. One level of this is through universities (…), but also adult education, museums, libraries and arts organizations. (UNESCO, 2021, p. 16)

Libraries are actively involved with OER. Their core mission of providing information access to all is being directly related to the OE movement, which makes curating and disseminating learning resources very much part of their responsibilities (ALA, 2015).

Literature review

Library support for OER

Academic libraries have shown strong leadership in advancing OS over the last two decades. Initially, as forerunners of Open Access (OA) (Ayris et al., 2018), they are also heavily involved in other approaches within the open knowledge ecosystem, including Open Data (Santos-Hermosa et al., 2023) and, more recently, OE/OER. Libraries have thus become the natural partners in any OE initiative, such as encouraging teachers to adopt, adapt and create OER by means of different services and strategies.

Some of the earliest efforts were preserving OER in institutional or educational repositories (Risquez et al., 2020; Santos-Hermosa et al., 2020). Also, certain library competencies, such as knowledge in copyright, licencing and intellectual property, have allowed them to participate in the creation of OS policies (Atenas et al., 2020; Santos-Hermosa et al., 2020) and contribute to institutional governance (Walz, 2017). Currently, some of the main OER drivers are subject librarians (Kimball et al., 2022); as they are quite familiar with the subject-specific resources, they can discover OER to incorporate in courses (Anderson & Leachman, 2019).

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

Libraries also play an integral part in the production of OER: for example, as content creators of MOOCs (Srikanta & Chakradhar, 2020) and Open textbooks (Vogus, 2019) and as publishers of their own OER guides and platforms, such as toolkits at Libguides.

Finally, libraries can also be providers of financial and training support (Bond et al., 2021), since they propose grant funding for the creation of OER and offer both non-formal or for-credit courses and modules employing OER.

One stream of the literature also identifies the shortcomings of academic libraries in this regard, including a lack of awareness and exposure to OER, the need to improve librarians' skills and the consequent need for a capacity-building plan (Calilung, 2021; Santos-Hermosa & Atenas, 2022). Other barriers include time, staffing, personal preference, workplace culture and the inertia of the status quo (Coyne & Alfis, 2021; Thompson & Muir, 2020).

Yet, it should be stressed that all this literature on libraries and OER focuses more on new librarian roles and services than on gathering evidence on the implementation of the OER Recommendation.

Studies about UNESCO's OER recommendation

UNESCO has produced a series of regional consultation workshops to discuss and share best practices about OER Recommendation implementation. Other international organisations have also published reports on this, including the International Council for Open and Distance Education (ICDE, 2020) and the Commonwealth of Learning (COL) (Sanjaya, 2021). Likewise, various organisations in Europe (e.g. the Edutopia network in Sweden, SRCE of Croatia, or National Forum of Ireland) are conducting research into OER, although not specifically on the scope of the OER Recommendation.

The studies that most directly address the Recommendation focus on OER as a framework for digital transformation (Ramírez-Montoya et al., 2022), as technological enablers (González-Pérez et al., 2022) and their uses in response to the COVID-19 pandemic. Finally, there are other studies that, although they focus on a specific area of action of the Recommendation, such as sustainability (Tlili et al., 2020) or inclusion (Schultz & Azadbakht, 2021), do not examine its implementation in any depth.

Thus, given the scarcity of specific studies, important gaps remain to be addressed in relation to the OER Recommendation. Our paper seeks to enhance understanding by adopting a more holistic approach, that is, by focusing on the implementation of all five areas of action based on the specific role played by one of the stakeholder libraries in the specific context of European Higher Education (EHE). What is evident is that very few surveys have been conducted on the impact of the implementation of the OER Recommendation; yet, in line with UNESCO's urgent call for more research, we consider that feedback from academic libraries is critical for obtaining a complete, up-to-date picture.

Research questions

To examine the impact of the implementation of the OER Recommendation, we seek to answer the following research questions (RQs):

RQ1: What is the current state of knowledge and awareness of the OER Recommendation amongst European academic librarians?

RQ2: How involved are academic libraries in the five areas of action – capacity building, policies, inclusivity, sustainability and international cooperation – of the OER Recommendation?

Methods

This study exploits quantitative and qualitative research designs, particularly the descriptive method. The latter aims to describe a population or situation as they are in nature, and it is designed to gather accurate information about existing conditions (McCombes, 2019), that is, characteristics or problems that exist within a unit or an organisation, or variations in practices between institutions (Edmonds & Kennedy, 2017). It has been considered appropriate to carry out a descriptive study here to determine the existence of an issue (knowledge of the OER Rec) and to appreciate its scope (implementation of its five areas of action). Following Lehman (1991), descriptive techniques – including frequencies and percentages (as applicable) – have been employed to analyse the data.

This study involved conducting an online survey, using SurveyMonkey software. The author, in collaboration with SPARC Europe and the European Network of Open Education Libraries (ENOEL), designed a specially tailored questionnaire to determine the incidence and impact of the OER Recommendation. Note that there are two editions of this survey: one created in 2021 (Santos-Hermosa, Proudman & Corti, 2021) and the current one in 2022 – which is an improved version and more specifically focused on the OER Recommendation. Here, our research has meant adding new questions, whilst discarding or reformulating others, to address more directly the implementation of the five areas of action of the OER Recommendation.

This research fully adheres to ethical professional practice, and the survey was approved by SPARC ethics and data protection policy (https://sparceurope.org/privacy-policy/). Consent information was displayed when participants opened the survey, and all data have been treated confidentially and anonymised for OA (*URL*).

The survey – consisting of 33 questions – was designed for completion by librarians responsible for OE services at academic libraries in Europe (including OE/Teaching & Learning Librarians, or the Library Director), and only required one response per organisation. The questionnaire was structured around the five areas addressed by the OER Recommendation plus three more concerned with demographics, the effects of COVID-19 and OE benefits and challenges. This paper focuses solely on the in-depth analysis of the OER Recommendation perspective, and as such represents an extension of a previously published report (Santos-Hermosa et al., 2022).

The questionnaire (openly available: *URL*) contained a mixture of single, multiple-choice and open-ended questions. Although most of the questions were optional (the total of participants responding to each question (Q) being indicated by n = number), one compulsory question was included in each section (demographics, consent and each of the five specific action areas) with the aim of maintaining the integrity of the survey data and to collect information on the OER Recommendation across all five action areas. A pilot test was run to test the survey's adequacy. Final survey responses were exported to comma-separated value (CSV) files to facilitate subsequent analysis.

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

This study was performed during the spring of 2022 (April 27th to June 16th), and the questionnaire being distributed through library and information science (LIS) listservs, consortia, social media, OE and librarians' networks (including LIBER – Association of European Research Libraries-, IFLA – International Federation of Library Association and Institutions-, OE Global, Creative Commons, OCLC – Online Computer Library Center-, ICDE – International Council for Open and Distance Education- and REBIUN -Spanish Network of University libraries) and ENOEL member institutions.

Results

We received 155 responses, though only 136 were complete; hence, hereon in, all references to respondents should be understood as $n = 136$. These respondents are from 28 countries and work in a range of institutions, and the most common being universities (98), followed by technical colleges (14), specialised institutions (8), applied science universities (13), distance learning universities (2) and a teaching college (1). The top 10 countries providing most responses are Spain (31), Finland (14), Netherlands (12), France (11), Greece (9), Ireland (8), Italy (7), UK (5), Switzerland (5) and Denmark (4).

Of the 126 institutions participating in the survey that identified themselves (by name), most are associated to library or university networks and consortia: 41.2% are LIBER member institutions; 31.7% are from ENOEL; 8.7% from EUA – European University Association; 1.6% from IFLA and the rest (16.6%) are not associated to networks of this type.

Whilst 57.3% of respondents are librarian staff in a supportive role, 37.5% are decision-makers, and 2% have a dual function. Slightly more than half the librarians (52%, $n = 71$) reported involvement in OE/OER for between 1 and 5 years and a combined total of 19% for between 6 and 10 years and for more than 10 years. The remainder had worked for either less than 1 year (22.2%) or were not involved at all (18.1%). Thus, in general, the EHE libraries have some experience in working with OE, with 70% having been involved in it for some time. On the other hand, by crossing data obtained from different questions, we have observed that just over half (56%) of those institutions that have worked for either less than 1 year in OE were not familiar with OER Recommendation and do not have one TFE dedicated to OE (but rather a multitasking librarians) neither have a specific role in advancing OE at their institution or they are still deciding.

Familiarity with UNESCO's OER recommendation

Three years after its approval, respondents reported a significant degree of familiarity with the OER Recommendation (73%), with more than a third claiming to be very familiar with it. However, 9% said they were not familiar with it at all (Q8, $n = 136$, Figure 1).

Of the surveyed libraries, 22% reported having already taken some action to implement the OER Recommendation – most of them by adapting or reviewing their strategy accordingly, whilst 45% said that they were discussing options on how to address it, and the remainder (23%) had taken no action to date.

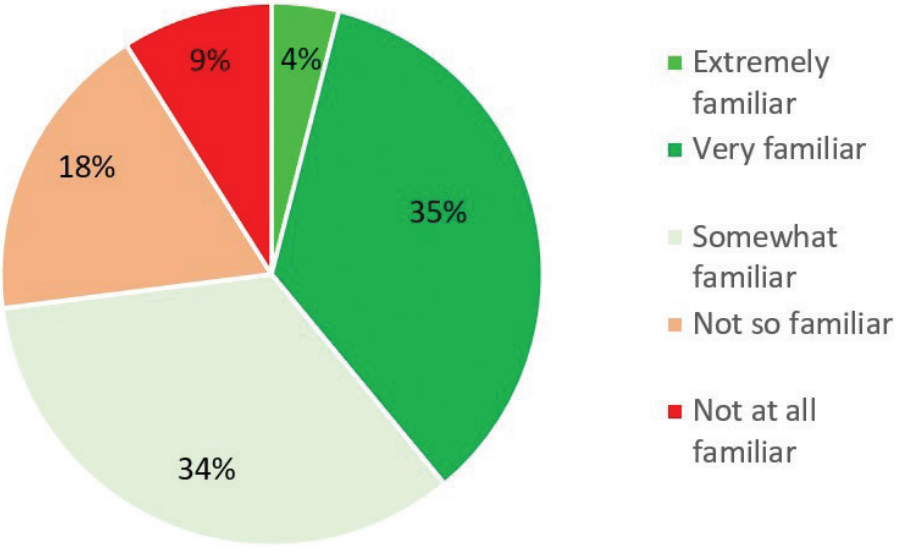

Figure 1. Familiarity with UNESCO's OER Recommendation.

Of the 22% of institutions taking some action to implement the OER Recommendation, 60% have been involved in OE for between 1 and 5 years and 18% for more than 6 years. Furthermore, by combining two of the survey questions, it emerges that 63% of libraries taking actions have a lead role (Q11) and a specific task force at the library level (Q13).

A comparison with responses to the first edition of the survey (Santos-Hermosa, Proudman & Corti, 2021), which also included a question about the respondents' knowledge of the OER Recommendation, shows that currently, there is a greater awareness of the Recommendation (61%, in 2021, vs. 73%, in 2022), and that there has been a 2% growth in the number of actions being implemented.

Action 1: Capacity building

The first area of action of UNESCO's (2019) OER Recommendation concerns building the capacity of all key stakeholders to access, create, re-use, re-purpose, adapt and redistribute OER. The survey results here are structured in two parts: (1) a library's engagement with OE – that is its role in advancing OE; and (2) the OE services that a library offers and the OE skills they perceive themselves as possessing or needing to deliver.

The data reveal that two-thirds of respondents (67%) take a support or lead role in engaging with or advancing OE/OER (Q11, n = 136, Figure 2). The other third is divided between those who are still deciding (17%), those who have no role (11%) and those who claimed not to know (5%). The results suggest most libraries are taking a role in advancing OE (mainly in a supportive manner), but there are some that are still unclear as to what their role should be, or which have yet to adopt a specific role.

The library departments most involved in the advancement of OE (Q12, n = 33) are the teaching/learning support department (11), followed by collection management

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

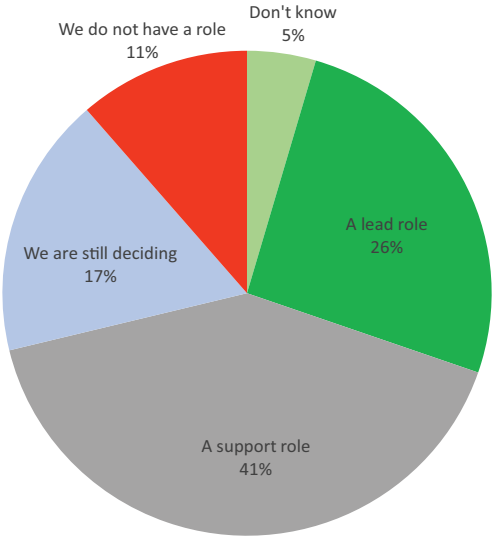

Figure 2. Library engagement with OE.

(5), research support (3) and open education (3), whilst the sections with least involvement are senior management (2), scholarly communications (2) and innovation (1).

As for how libraries are advocating for OE (Q13, n = 98, Figure 3), most libraries reported not having a formal task force or committee dedicated to OE in their institution. However, in those libraries where such an entity existed, it tended to operate more at the library level than at the institution-wide level (45 libraries vs. 27). A few libraries commented that they had national or consortia bodies advocating for OE as opposed to entities operating at the library or institutional level.

The survey finds that libraries promote OE through a range of different channels (Q15, n = 78). Whilst 19.2% (15) of respondents claimed 'not to know' or did not provide a specific answer here, library training was by far the most frequently mentioned channel (42.3%, 33 answers), followed by website and social media (11.5%, 9); strategic plans (10.2%, 8); collaboration through repositories, consortia and working groups (8.9%, 7); at meetings (5.1%, 4); and via projects (2.5%, 2).

The OE/OER services provided by the libraries are wide ranging (Q16, n = 110, Table 1). The top three services (advice on copyright and open licencing, information literacy (IL) and training/education) all lie close to a library's core work, whilst the least frequently provided (OER course pack provision and participatory design) are associated with activities that are furthest removed from their traditional tasks and which are characterised by the need for a teaching-based approach. Some examples of other services, provided by seven respondents, are media Lab (video support service), repositories, metadata support and social media services to share OER. A national OER library that collects materials from museums, libraries and archives (finna.fi) was also reported.

Finally, as regards their perception as to whether they had the skills to support OE (Q17, n = 93, Figure 4), the libraries considered themselves as being endowed more frequently with 'many skills', as opposed to the 'full set of skills', in almost all the areas covered by the survey. However, the three areas in which libraries most

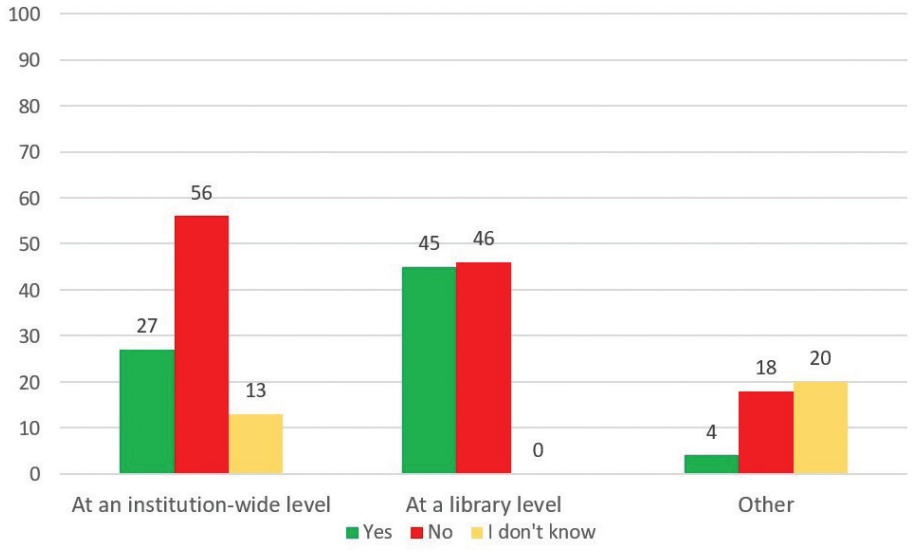

Figure 3. Existence of an OE task force.

Table 1. Frequency (%) of OE services provided by libraries.

Answers	Frequency	Relative frequency
Advice on copyright and open licensing	93	0.13
Information literacy, including OE	86	0.12
Training / Education	80	0.11
Management & storage service (e.g. repositories)	69	0.10
Discovery services	65	0.09
Collection management, dealing with education publishers	61	0.09
Metadata to index digital resources	56	0.08
OER co-creation	55	0.08
Knowledge exchange	37	0.05
Data curation & interoperability	35	0.05
Creation of open textbooks	25	0.04
OER provision to complement courses	20	0.03
Course pack provision	11	0.02
Participatory design	10	0.01
Other (please specify)	7	0.01
None of the above	4	0.01

frequently reported having the full set of skills to support OE are IL (36), training/education (27) and management and storage services such as repositories (25). Likewise, the libraries identified these same three areas as the ones for which they most felt they possessed many (of the required) skills (36, 27 and 26, respectively), in addition, and most significantly, to the area of providing advice on copyright and open licencing (57). In contrast, libraries consider themselves as having a more limited skills set for providing services in the areas of the creation of open textbooks, OER provision of courses and participatory design.

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

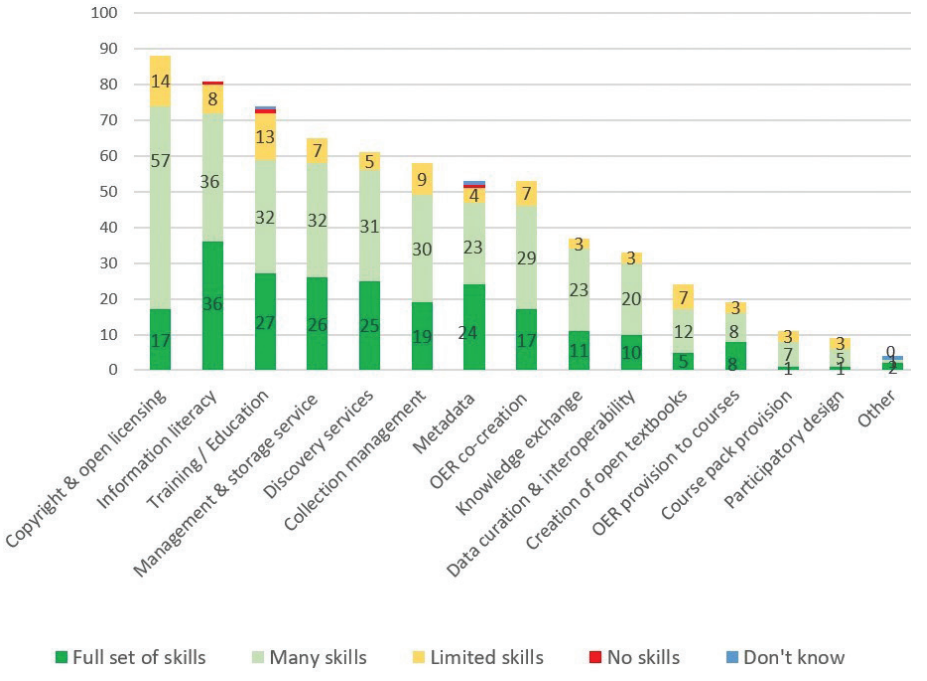

Figure 4. Library skills that support OE.

A comparison with responses regarding capacity building in the first edition of the survey (Santos-Hermosa, Proudman & Corti, 2021) reveals an upward trend in the library's role in engaging with or advancing OE/OER (46.5%, in 2021, vs. 67%, in 2022).

Area 2: Developing supportive policy

The second area of action of the OER Recommendation concerns the regulatory framework to foster OE/OER. The survey provides data specifically about the availability of policies addressing OE within the surveyed institutions, policy typologies and library involvement in their conception.

Around 60% of the institutions that answered this question (Q19, $n = 110$, Table 2) have, or have given some thought to, some kind of policy that addresses OE in one way or another: 18.2% (20 institutions) reported having a policy in place, 23.6% (26) stated that it was under development and 19% (21) stated that it was under consideration. However, 31% (35) indicated that they do not have an OE policy, and 7.2% (8) were unsure whether such a policy existed. Some 84% of the libraries that reported having a policy also deploy an OE task force inside the library or at the institutional level, and they have also been involved in OER for more than 1 year. Eleven of these 20 institutions operating an OE policy registered some information (name and URL) about them in an open text field (qualitative data openly available in Santos-Hermosa, Proudman, & Corti, 2022).

Of the 46 institutions with a policy or with one under development (Q20, $n = 46$, Table 2), only six constitute standalone policies dedicated to OE, whereas 30 form

Table 2. OE policies and library involvement.

Answers	Number	Percentage
Yes	20	18.1%
Under development	26	23.6%
Under consideration	21	19.1%
No	35	31.8%
I don't know	8	7.3%

Standalone policy dedicated to OE	30	60.2%
Part of a larger, overarching policy	6	13.1%
Don't know/ No answer	10	21.7%

part of a larger overarching policy. The 10 remaining respondents, which are attached to institutions whose policy was under development, reported not knowing or offered no answer. Of these same institutions, 34 (74% of the total) report the library having been involved in the conception of the OER policy (Q21, $n = 46$), of which six correspond to the standalone policies and 13 to part of a larger OE policy. These data suggest, therefore, that in most of the institutions operating OE policies – in place or under development – libraries are involved in their creation, and that they do so through either their library or institutional OE task force.

A comparison with responses to the first edition of the survey (Santos-Hermosa, Proudman, & Corti, 2021). shows that OE policies increasingly form part of a larger or global policy (30, in 2022, vs. 17, in 2021), and that there is a greater involvement of the library in the conception of these policies (34, in 2022, vs. 22, in 2021).

Area 3: Encouraging effective, inclusive and equitable access to quality OER

The third area of action of the OER Recommendation is concerned with ensuring that principles of gender equality, non-discrimination, accessibility and inclusiveness are reflected in OE/OER strategies or programmes. To determine the extent of implementation in this area, the survey collects information about the steps taken by the libraries to provide inclusive OER and the presence – or otherwise – of diversity, equity and inclusion (DEI) in OER strategies. More specifically, the survey seeks to determine whether libraries are sensitive to different ages, races, genders, socioeconomic statuses, etc., and whether they are culturally equitable (i.e. embodying the values, policies and practices of all people), linguistically diverse (e.g. use local languages and at least one second language) and accessible to meeting both the needs and material circumstances of target learners (e.g. available offline, in printed version, etc.).

Amongst the different ways of ensuring inclusion (Q22, $n = 105$, Figure 5), the survey shows that more than half of the academic libraries are most concerned with taking steps to provide OER that is accessible (64.1%) and linguistically diverse (53.8%). In contrast, fewer than half responded that their OER are culturally equitable (39.2%) or sensitive (40.8%) to DEI areas that include age, race, gender or socioeconomic status. Yet, a significant number of libraries (38 or 42% of those responding) reported not taking any proactive steps to provide sensitive OER or to ensure their resources are culturally equitable and available in more than one language.

Further analysis of these results shows that 25.7% (27 of 105) of libraries reported addressing all four areas of DEI, and that amongst these, 20.75% (that is, 20 of the 27) reported that effective and inclusive access is reflected in their OER strategies. Amongst the libraries addressing all areas of DEI, 85.2% acknowledge an involvement in OER of more than 1 year, whilst 77.7% also take a lead or support role in OE.

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

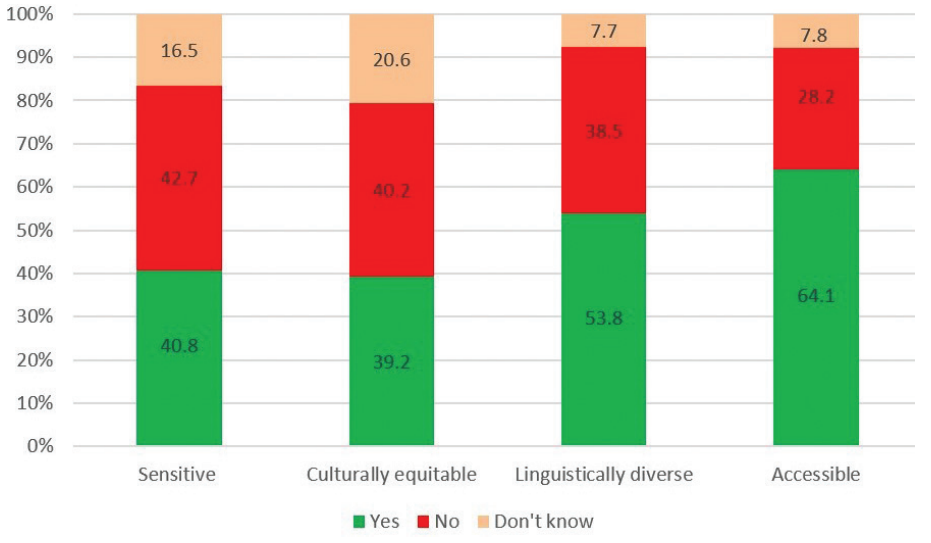

Figure 5. Provision of inclusive OER.

As for the presence of aspects of DEI in their OER programmes (Q25, n = 100), only 41% of respondents acknowledged promoting them – most of these libraries doing so as part of an institutional-wide programme or in accordance with an institutional strategy (59%) – whilst the rest reported doing nothing to promote inclusive access (16%), that such steps were not applicable (24%) or that they had no knowledge of any such strategy (19%). These results are consistent with the responses of those institutions to an open-ended question in which they reported doing nothing with respect to the promotion of DEI as no specific strategy or programme was deployed within the library or institution.

Area 4. Sustaining OER

The fourth area of action of the OER Recommendation is concerned with nurturing the creation of sustainable models of OER. The survey addresses this aspect from two perspectives: that of human resources (library staff) and that of financial resources (OE funding).

As far as the number of library workers dedicated to OER (Q27, n = 102, Figure 6) is concerned, results show that around 43% (44 responses) of libraries have fewer than 1 FTE (full time equivalent) staff member. The others are divided between those with more than 2 FTE staff members (22% with 1–5, 2% with 6–9 and 2% with more than 10), and those who have no personnel (27%) or don't know (4%).

As for financial resources to encourage the creation of OER (Q28, n = 104), only 12.5% stated having a grant programme to do so. When libraries were asked where they acquire funding for OE work (Q29, n = 100, Figure 7), 54% reported obtaining it from the library budget, 24% from other institutional budgets and 23% did not know. However, albeit in smaller proportions, 6% reported obtaining funding from

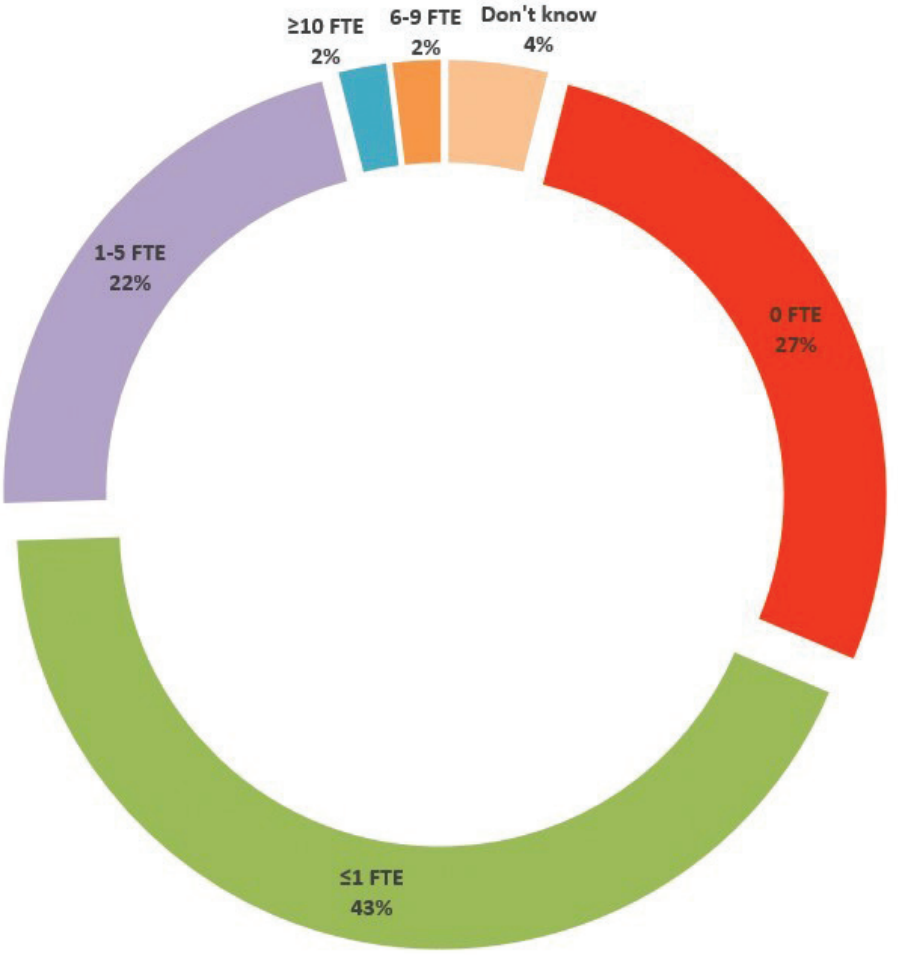

Figure 6. Library staff dedicated to OER.

a national/regional project, 6% from a European project and 6% from 'other' project types – typically specified as a local project.

Interestingly, the majority of the 23% of respondents who did not know the origin of their OE funding reported playing only a supporting (and not a decision-making) role in relation to OER. Additionally, half of these respondents reported (Q5) not being involved in OER or having been involved for less than a year, so it is possible that they do not have a specific program for it. The other half reported working on OE projects with other departments (with one respondent stating: '*As OE develops at the institutional level, I think there could be more involvement of libraries in the future*'), by disseminating OER via the repository or running training workshops. Since the latter constitute traditional library services, the integration of OE into them may not require extra funding. All in all, the limited involvement in OE and the provision of few full-time staff, together with the actions carried out from within other institutional units or integrated into other library services, may account for the doubts or lack of knowledge on the part of some libraries.

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

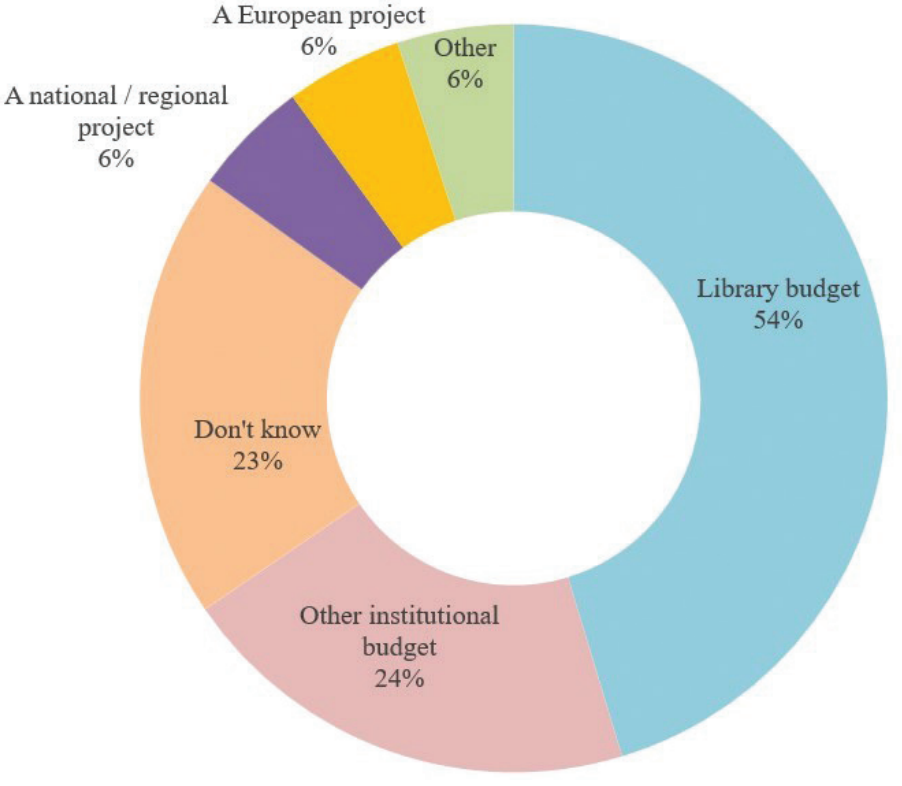

Figure 7. OER funding provenance.

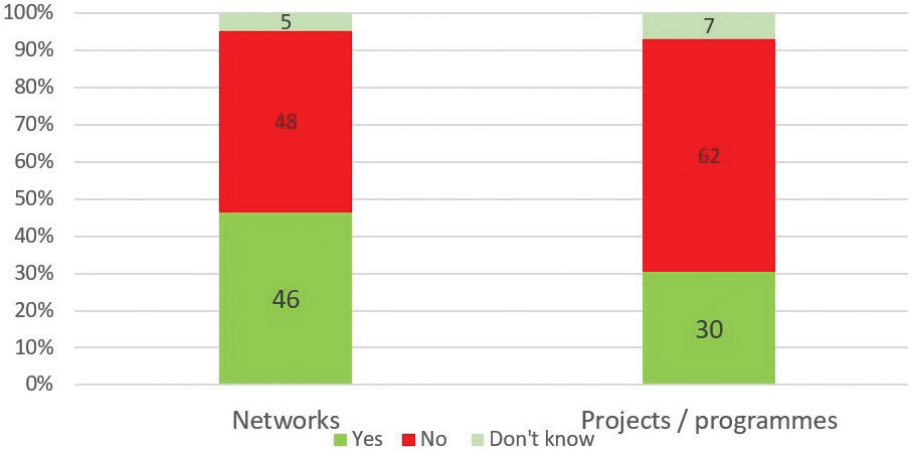

Figure 8. Library involvement in OER networks/projects.

Area 5: Promoting and reinforcing international cooperation

The fifth area of action of the OER Recommendation concerns itself with fostering international cooperation between stakeholders to develop a global pool of OER and

to minimise duplication in OER investments. Here, the survey asked libraries about their involvement in creating, maintaining or participating in OE networks or programmes.

Results show that libraries seem to be more involved in networks (just as many participate in them as do not) than in projects (Q30, n = 102, Figure 8). More specifically, 46.5% (46 respondents) reported they were involved in networks and 30.3% (30) in projects/programmes.

Some of the institutions surveyed provided further details of their networks in an open field. These data (Table 3) have been classified in different categories: the majority operate at the library, university or national level, but some networks were also based on repositories/ platforms.

Discussion

We sought to determine the level of awareness of the OER Recommendation amongst academic libraries (RQ1) and their degree of implication in the five action areas defined in UNESCO's normative instrument (RQ2). Later, we discuss our findings in relation to these two RQs and explore their specific relevance to the libraries included in our survey.

Awareness of the OER Recommendation

Our results show that the EHE libraries that responded to our survey have a general understanding of the OER Recommendation, and that their familiarity with

Table 3. Networks in which Survey respondents' libraries are involved.

NETWORKS	Libraries	ENOEL (European Network of Open Education Librarians)
		LIBER OER group
		Working group of academic Libraries, Open and Online Education (B-OOO) - Netherlands
		REBIUN (Spanish Network of Universities Libraries)
		SHB/UKB working group (consortium of Dutch libraries)
	Universities	Englisght Network (European University Alliance), in a working group of Open Science and OER
		YERUN (Young European Universities Network)
		YUFE (Young Universities for the Future of Europe)
		UNICA (institutional Network of Universities from the Capitals of Europe)
		Aurora Alliance
	National	Finnish national open education expert panel
		National library working group Open & Online Education
		National networks of Open Science and Open education
		SURF's special interest groups (SIGs) - IT in Dutch education and research
		Edusources (platform for digital (open) educational resources for Dutch education)
	Repositories and platforms	Wikiwijs (platform for the use and development of OER in education)
		OPENAire (open scholarly communication infrastructure to support European research
		MERLOT
		The diversity, equity and inclusion (DEI) Office

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

it has increased over the last year. Whilst, to the best of our knowledge, there have been no previous attempts to specifically determine the degree of familiarity with the instrument amongst librarians, some authors have analysed their understanding of OER. Thus, Nawazish and Batool (2021) and Kolesnykova and Matveyeya (2021) reported that 74 and 84.42% of surveyed libraries had some understanding of OER, respectively, and that subject librarians tend to be quite familiar with the OER of their specific disciplines (Kimball et al., 2022). However, Calilung (2021) notes that librarians' familiarity with OER depends on their degree of exposure to these resources, and that, therefore, levels of OER awareness can oscillate between good and limited. All in all, it seems that currently libraries have different levels of understanding of OER, which is reflected in different speeds of deployment of these resources.

Interestingly, the COVID-19 pandemic seems to have served as a catalyst of both an increased awareness of OER and an enhanced engagement with the OER Recommendation (Huang et al., 2020; ICDE, 2020; UNESCO, 2023).

Capacity building

Action area 1 – that is, capacity building – is characterised primarily by training exercises focused on raising awareness of OER, which includes an understanding of the use of copyright and open licences and the curation of open content in education. Here, our survey shows that the skills and services that support OE/OER in participating libraries lie, primarily, close to a library's core work (i.e. copyright, repositories and training) and less so in areas furthest removed from traditional tasks and more closely related to teaching (including, open textbooks, course provision, etc.). This finding is in line with both Schultz and Azadbakht (2021) and Osuigwe and Levey (2023), who found that the main OER librarian services included training (i.e. workshops and webminars) and the provision of copyright advice. Moreover, a recently published UNESCO (2023) report on the implementation of the OER Recommendation, which includes results from 78 member states, specifically identifies librarians as one of the stakeholders who have undertaken capacity-building activities at the institutional level, and that some of these interventions have included the development of OER repositories.

As regards their efforts to raise awareness of OER, most of the libraries surveyed reported a clear engagement with OE and declared themselves to be playing a key role in its advancement (primarily, in a supportive fashion, with teaching/learning support departments taking the lead). In this regard, Bond et al. (2021) point to the benefits of engaging in campus-wide collaboration. Such initiatives enable libraries to work in partnership with other academic departments (Bond et al., 2021) and to disseminate training to all stakeholders (Huang et al., 2020).

Our study also reveals that librarians would benefit from receiving greater training in certain specific areas of OE, especially those related to teaching. Existing actions in this line include the Creative Commons Certificate Program for Librarians and the SPARC Open Education Leadership Program. Additionally, Calilung (2021) suggests that a capacity-building plan would improve OER management and Santos-Hermosa, and Atenas (2022) recommended that more training about openness to be included in the formal curricula of LIS schools.

Developing supportive OER policies

Our survey indicates that, compared to its previous edition (Santos-Hermosa; Proudman & Corti, 2021), an increasing number of HEIs employing policies that address OE are primarily as part of a larger overarching policy, and that their libraries are typically involved in their conception. Indeed, an ICDE report (2020) has suggested that most countries already have, or are in the process of developing, policies to support OER integration, whilst a number of other studies have identified a new group of policies that either contain or embed OE in their areas of action – such as general openness policies with an OE/OER component (Atenas et al., 2020; Santos-Hermosa et al., 2020) – and which have been added to the four policy types initially identified by the European Commission (Inamorato dos Santos et al., 2017).

According to UNESCO (2023), various member states, including Finland, France, Georgia, Germany, Latvia, Spain and Switzerland, have highlighted specific links between OER and other open policies. Likewise, here, we present additional evidence of the current trend to create global policies that integrate OE with other elements of openness, including OA to research publications and data, in accordance, that is, with UNESCO's (2019) recommendation of embedding OER policies within national policy frameworks and aligning them with other open policies.

Significantly, libraries are considered as being one of the stakeholders creating OE polices as well as being one of the key support areas for decision-making related to such policies (Coyne & Alfis, 2021), given the regulations require the collaborative actions of multiple individuals across an institution (Atenas et al., 2022). In this regard, several examples of the participation of librarians have been reported (Risquez et al., 2020; Santos-Hermosa et al., 2022; Thompson & Muir, 2020).

Encouraging DEI

Our survey shows that, with regards to inclusion, academic libraries are most concerned with promoting accessibility (and less so with offering diverse, multilingual and culturally equitable OER), and that they do so by adhering closely to their institutional strategies and programmes.

Librarians have approached accessibility by providing a range of services, including those that assist faculty in locating, using and creating accessible OER, whilst they also provide OER accessibility toolkits and incorporate adequate metadata for the management of OER collections and repositories (Wolfe, 2020). According to Schultz and Azadbakht (2021), most OER librarians possess, by their own measure, a basic understanding of accessibility, although they have not received any in-depth training, and they consider themselves confident in their knowledge of such matters. However, these authors also acknowledge that accessibility remains an emerging area of focus for librarians, and more work is required to ensure they are fully conversant with it. This conclusion, moreover, is not just applicable to libraries, since a systematic review by Zhang et al. (2020) finds that accessibility is still in its infancy within OER in general.

Currently, the other elements of inclusiveness are seen by libraries as more challenging, although several academic libraries are already translating OER into local languages (Osuigwe & Levey, 2023) and addressing multilingual and cultural barriers (Kolesnykova et al., 2022).

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

Sustainability

OER sustainability is frequently linked to *affordability*, typically associated with the lower costs incurred when students use open-textbooks. However, alternative OER sustainability models based on other costs (including staffing, workflow development, infrastructure, grant programmes, incentives, etc.) have also been identified (Tlili et al., 2020).

The EHE libraries participating in the survey reported disposing of highly limited human and financial resources to dedicate to OER. This can be seen as constituting a distinct barrier to sustainability, since OER are often associated with increased workloads and libraries typically have to face the problems associated with budget cuts (Coyne & Alfis, 2021). Indeed, whilst some libraries have shown a greater commitment to hiring additional staff and/or the reallocation of responsibilities (Essmiller et al., 2020) to support OER initiatives, others manage to contribute to the sustainability of OER despite uncertain funding (Thompson & Peach, 2023) and without increasing staff and salaries (Coyne & Alfis, 2021). A third group found that the effort involved in supporting the development of OER was unsustainable for their library (Morgan, 2018).

Therefore, although sustainability was adopted as one of the American Library Association's (ALA) Core Values of Librarianship in 2019, additional financial investment and a change of mindset and strategy are needed to facilitate sustainable library OER programmes. Some of the strategies that libraries are currently adopting in their efforts to improve scalability and sustainability include OER publishing models, OER programmes based on alternative open-textbook grants and streaming video licencing (Hoover et al., 2020), incentives for OER creation (Bond et al., 2021) and the application of Human Performance Technology (HPT) (Essmiller et al., 2020). Other effective actions to ensure sustainability might include observing new suppliers entering the marketplace, identifying changes in licencing models and partnering with teaching departments to incorporate OER into courses (Hoover et al., 2020).

Finally, certain differences are noted between the US and Europe as far as human resources and OER in libraries are concerned. Thus, in the US, OER librarians are more entrenched in their role, there being several professional development certification programmes and specific OER librarian positions, whereas in Europe, no one influential organisation has yet to be established, although advances have been made, thanks to the efforts of certain institutions, working groups and networks. Thus, appointing an OER full-time librarian or a specific team remains one of the challenges of guaranteeing sustainability.

International cooperation

The academic libraries surveyed participate more in (institutional, national and European) OE/OER networks than in projects. Indeed, two influential European networks with well-defined strategies have implemented various OE initiatives: the LIBER Educational Resources working group (https://libereurope.eu/working-group/liber-educational-resources-working-group/) and OE SPARC (https://sparceurope.org/what-we-do/open-education/enoel/). In addition, libraries could also leverage on existing national or regional organisations (Osuigwe & Levey, 2023) to work together in OER. The UNESCO (2023) report also includes international

professional networks as a collaborative mechanism of the OER Recommendation, whilst Sweden has highlighted libraries as a key element in OER infrastructure. Some projects in which libraries are involved include Wikipedia (Bridges et al., 2021), ERASMUS+ and others forming part of OS and repository projects (Santos-Hermosa et al., 2020).

Limitations

The study presented here, as well as its main results, cannot be considered representative of *all* European academic libraries, and the data being limited to a relatively small number of them. However, these findings can be used as a starting point to monitor the progress of the implementation of the OER Recommendation in academic libraries and should also be taken into consideration when designing new surveys on this topic.

Conclusions

Three years after the publication of UNESCO's Recommendation on OER, we find that most of the academic libraries surveyed are quite familiar with this normative instrument and are actively engaged in each of its five action areas. However, whilst some libraries show greater strengths and have advanced further in certain specific areas of the OER Recommendation, others continue at an incipient stage of implementation and still face considerable challenges.

Adopting a traffic light system as a way of indicating the degree of involvement of academic libraries in the OER Recommendation, our study shows:

- Green: High degree of involvement in action *area 1*, with *capacity building* attracting most efforts and with considerable progress being recorded. Libraries increasingly offer tailored OE services and provide the skills that allow stakeholders to access, create, re-use, adapt and redistribute OER. They also offer guidance in applying for open licences. Yet, further training is required in specific aspects of OE, most notably those requiring a teaching-based approach.
- Flashing amber: Medium-high degree of involvement in *area 2 (OE policy development*), via participation in policy creation and promotion, and in *area 3 (inclusive OER)*, via promotion of inclusion by way of enhanced accessibility. However, in these same areas (2 and 3), OE policies have yet to be widely adopted across Europe, and diverse, multilingual, culturally equitable OER remain underexploited.
- Steady amber: Intermediate degree of involvement in *area 5 (international collaboration*), with libraries increasingly involving themselves in international working groups and OE support networks; yet, few are active in OE-specific projects.
- Red: Low degree of involvement in *area 4 (sustainability for OER)*, with considerable deficiencies in sustaining OER, and with often inadequate funding and staffing levels. There is a clear need for more OER sustainability models applicable to libraries.

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183

In short, it is evident that to continue implementing UNESCO's OER Recommendation, academic libraries face long-term challenges – in terms, that is, of sustainability and DEI (especially in developing appropriate strategies and practices) – and also medium-term challenges – in terms, that is, of creating OE policies, participating in collaborative projects, and tailoring a capacity development plan specific to OE competencies.

This study has also revealed that the libraries taking most actions to implement the OER Recommendation, or making most progress in one or more of its areas, are those that have been engaged in OE for between at least 1 and 5 years, which play a supportive – or even a leading – role in their institution and that operate some type of internal OE committee or task force. Furthermore, research shows that between 2021 and 2022, libraries have increased, albeit slightly, their knowledge of the OER Recommendation, and their role in OE and involvement in the creation of institutional policies, by working in line with a broader institutional commitment and strategy. This suggests that a campus-wide model of collaboration built on partnerships of libraries, different academic and support departments could be key to advancing in the implementation of the OER Recommendation.

Acknowledgements

This study was supported by the Spanish Ministry of Science and Innovation [PID2021-125828OB-I00] and SPARC.

The author thanks all the librarians surveyed, the ENOEL members who piloted the survey and, especially, SPARC Europe and UNESCO Dynamic Coalition for their support.

References

ALA. (2015). *Access to Library Resources and Services.* Retrieved from http://www.ala.org/advocacy/intfreedom/access

Anderson, T. & Leachman, C. (2019), Strategies for supporting OER adoption through faculty and instructor use of a federated search tool. *Journal of Librarianship and Scholarly Communication, 7*(1), eP2279. https://doi.org/10.7710/2162-3309.2279

Atenas, J. et al. (2020). *Open Education Policies: Guidelines for Co-Creation*. Open Education Policy Lab. Retrieved from https://doi.org/10.5281/zenodo.4032993

Atenas, J. et al. (2022). *Defining and Developing 'Enabling' Open Education Policies in Higher Education.* Retrieved from https://oro.open.ac.uk/83314/

Ayris, P. & Ignat, T. (2018). Defining the role of libraries in the Open Science landscape: a reflection on current European practice. *Open Information Science, 2*(1), 1–22. https://doi.org/10.1515/opis-2018-0001

Bond, J. D., Huddleston, B. S. & Sapp, A. (2021). Faculty Survey on OER: Perceptions, Behaviors, and Implications for Library Practice. *Journal of Librarianship and Scholarly Communication, 9*(1), eP2401. https://doi.org/10.7710/2162-3309.2401

Bridges, L., Pun, R. & Arteaga, R. (2021). *Wikipedia and Academic Libraries: A Global Project*. Retrieved from https://doi.org/10.3998/mpub.11778416

Calilung, R. (2021). Perceptions and practices of academic librarians in handling and managing Open Education Resources (OERs): Basis for capacity building plan. *University Library at a New Stage of Social Communications Development. Conference Proceedings, 5*, 53–67. https://doi.org/10.15802/unilib/2020_220361

Coyne, A. & Alfis, R. (2021). Open educational resource policy considerations and recommendations: Arguments for library involvement. *Irish Journal of Academic Practice, 9*(2), 1–17. https://doi.org/10.21427/X4Q4-FX43

Edmonds, W. & Kennedy, T. (2017). *An applied guide to research designs: Quantitative, Qualitative, and Mixed Methods*. SAGE Publications, Inc, https://doi.org/10.4135/9781071802779

Essmiller, K., Thompson, P. & Alvarado-Albertorio, F. (2020). Performance improvement technology for building a sustainable OER initiative in an academic library. *TechTrends, 64*(2), 265–274. https://doi.org/10.1007/s11528-019-00467-2

González-Pérez, L. I., Ramírez-Montoya, M. S. & García-Peñalvo, F. J. (2022). Technological Enablers 4.0 to drive open science and education: Input to UNESCO recommendations. *RIED-Revista Iberoamericana de Educacion a Distancia, 25*(2), 23–48. https://doi.org/10.5944/ried.25.2.33088

Hoover, J., Shirkey, C. & Barricella, L. S. (2020). Exploring sustainability of affordability initiatives: a library case study. *Reference Services Review, 48*(3), 447–456. https://doi.org/10.1108/RSR-03-2020-0016

Huang, R. et al. (2020). *Guidance on Open Educational Practices during School Closures: Utilizing OER under COVID-19 Pandemic in line with UNESCO OER Recommendation.* Institute of Beijing Normal University.

ICDE. (2020). *Report from the ICDE OER advocacy committee's survey 2020: implementation of the Unesco Recommendation on Open Education Resources (OER)*. Retrieved from https://i4quality.se/images/publications/2021/OERREPORT2020NOVEMBERFinal.pdf

Inamorato dos Santos, A., Punie, Y. & Scheller, K. (2017). *Going Open: Policiy Recommendations on Open Education in Europe (OpenEdu Policies)*. Publications Office European Union. Retrieved from https://data.europa.eu/doi/10.2760/111707

Kimball, R. et al. (2022). Motivations and barriers in the adoption of OERs: The role of subject librarians. *Journal of Academic Librarianship, 48*(4), 102542. https://doi.org/10.1016/j.acalib.2022.102542

Kolesnykova, T. O., Corti, P. & Buist-Zhuk, M. (2022). European practices of overcoming language barriers in times of crisis: Open educational resources. *University Library at a New Stage of Social Communications Development*. *Conference Proceedings, 7*, 202–217. https://doi.org/10.15802/unilib/2022_270952

Kolesnykova, T. O. & Matveyeva, O. V. (2021). First steps before the jump: Ukrainian university librarians survey about OER. *University Library at a New Stage of Social Communications Development. Conference Proceedings, 6*, 96–107. https://doi.org/10.15802/unilib/2021_248379

Lehman, R. S. (1991). *Statistics and Research Design in the Behavioral Sciences.* Wadsworth/Thomson Learning.

McCombes, S. (2019). *Descriptive Research. Definition, Types, Methods & Examples.* Retrieved from https://www.scribbr.com/methodology/descriptive-research/

Morgan, K. (2018). *Affordable Learning Engagement and Publishing Strategies: Empowering Opportunities for Open-Access Publishing – The Evolution of Affordable Content Efforts in the Higher Education Environment: Programs, Case Studies, and Examples. In The Evolution of Affordable Content Efforts in the Higher Education Environment: Programs, Case Studies, and Examples* (pp. 291–304). Retrieved from https://open.lib.umn.edu/affordablecontent/chapter/affordable-learning-engagement-andpublishing-strategies-empowering-opportunities-for-open-access-publishing/

Nawazish, M. & Batool, S. H. (2021). Framing the new role of information professionals: Investigating copyright literacy levels and awareness of academic librarians in Pakistan. *Academic Librarianship, 48*(1), 102480. https://doi.org/10.1080/13614533.2021.1906716

Osuigwe, N. & Levey, L. (2023). *The UNESCO OER Recommendation and Open Knowledge: An Overview for African Librarians*. Retrieved from https://doi.org/10.13140/RG.2.2.29867.82725

Ramírez-Montoya, M. S., McGreal, R. & Obiageli Agbu, J-F. (2022). Horizontes digitales complejos en el Futuro de la Educación 4.0: luces desde las recomendaciones de UNESCO *RIED-Revista Iberoamericana de Educación a Distancia, 25*(2), 09–21. https://doi.org/10.5944/ried.25.2.33843

Risquez, A. et al. (2020). Towards a devolved model of management of OER? The case of the Irish higher education sector. *The International Review of Research in Open and Distributed Learning, 21*(1), 99–111. https://doi.org/10.19173/irrodl.v20i5.4545

Sanjaya, M. (2021). Implementing the UNESCO OER Recommendation: COL Experiences. *Commonwealth of Learning (COL)*. http://hdl.handle.net/11599/3872

Santos-Hermosa, G. & Atenas, J. (2022). Building capacities in open knowledge: Recommendations for library and information science professionals and schools. *Frontiers in Education, 7*, 866049. https://doi.org/10.3389/feduc.2022.8660497

Santos-Hermosa, G., Estupinyà, E., Nonó-Rius, B., Paris-Folch, L. & Prats-Prat, J. (2020). Open educational resources (OER) in the Spanish universities. *Profesional de La Informacion, 29*(6), 1–19. https://doi.org/10.3145/epi.2020.nov.37

Santos-Hermosa, G., Quarati, A., Loría-Soriano, E., & Raffaghelli, J.E. (2023). Why does open data get underused? A focus on the role of (open) data literacy. In, Raffaghelli, J. E. & Sangrà, A. (Eds.). *Data Cultures in Higher Education. Higher Education Dynamics*. Springer, 59. Retrieved from https://doi.org/10.1007/978-3-031-24193-2_6

Santos-Hermosa, G., Proudman, V. & Corti, P. (2021). *Open Education in European Libraries of Higher Education*. Retrieved from https://doi.org/10.5281/zenodo.5734980

Santos-Hermosa, G., Proudman, V. & Corti, P. (2022). *Open Education in European Libraries of Higher Education*. Retrieved from https://doi.org/10.5281/zenodo.7244712

Schultz, T. & Azadbakht, E. (2021). Open but not for all: A survey of open educational resource librarians on accessibility. *College & Research Libraries, 82*(5), 755. https://doi.org/10.5860/crl.82.5.755

Srikanta, S. & Chakradhar, R. (2020). Advancement of open learning through MOOCs in academic libraries: Impact and challenges. *KIIT – Journal of Library and Information Management, 7*(2), 91–99. http://doi.org/10.5958/2455-8060.2020.00011.7

Thompson, S. & Muir, A. (2020). A case study investigation of academic library support for open educational resources in Scottish universities. *Journal of Librarianship and Information Science, 52*(3), 685–693. https://doi.org/10.1177/0961000619871604

Thompson, J. & Peach, J. (2023). Building community through professional development for librarians. *Journal of Open Educational Resources in Higher Education, 2*(1), 253–265. https://doi.org/10.13001/joerhe.v2i1.7203

Tlili, A. et al. (2020). The evolution of sustainability models for Open Educational Resources: insights from the literature and experts. *Interactive Learning Environments, 31*(3), 1421–1436. https://doi.org/10.1080/10494820.2020.1839507

UNESCO. (2019). *Recommendation on Open Educational Resources (OER)*. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000373755/PDF/373755eng.pdf.multi.page=3

UNESCO. (2021). *Accessible Open Educational Resources (OER): Briefing Paper.* Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000380471

UNESCO. (2023). *Implementation of Standard-Setting Instruments, Part VI: 2019 Recommendation on Open Educational Resources (OER); Consolidated Report on the Implementation of the Recommendation*. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000386595

Vogus, B. (2019). Open Educational Resources (OER) and Textbooks: Opportunities for Academic Libraries. *Public Services Quarterly, 15*(3), 242–247. https://doi.org/10.1080/15228959.2019.1629858

Walz, A. (2017). A library viewpoint: exploring open educational practices. In, *Open: The Philosophy and Practices That are Revolutionizing Education and Science*. Ubiquity Press, pp. 147–162. Retrieved from https://doi.org/10.5334/bbc.l

Wolfe, A. (2020). *Accessibility Across the Curriculum: An OER Website on Accessibility*. *CUNY Academic Works.* Retrieved from https://academicworks.cuny.edu/gc_etds/3644

Zhang, X. et al. (2020). Accessibility within open educational resources and practices for disabled learners: a systematic literature review. *Smart Learning Environments, 7*(1), 1–19. https://doi.org/10.1186/s40561-019-0113-2

Citation: Research in Learning Technology 2024, **32**: 3183 - http://dx.doi.org/10.25304/rlt.v32.3183