

ORIGINAL RESEARCH ARTICLE

Open educational resources for research training: quality assurance through a collaborative evaluation

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Although it is considered that open educational resources offer vast pedagogical opportunities for any educational context, there have been only few studies so far that have linked their use or application in the field of research training, and even less works that have addressed their quality assurance for that context. As part of an inter-institutional project, the main aim of this article is the collaborative selection and evaluation of appropriate educational resources for research training. The mixed method approach of the article includes needs' analysis of researchers in training through questionnaires and interviews. This was the starting point for the collaborative evaluation of educational resources using the agreed common criteria derived from the Learning Object Review Instrument (LORI) evaluation instrument. This article suggests recommendations regarding the collaborative evaluation of educational resources and the use of LORI, and suggestions for creators of educational resources for research training to facilitate the quality assurance of their materials. A website is being developed to bind together the resources that have met the quality criteria established in collaborative evaluation.

Keywords: evaluation criteria; higher education; distance education

Introduction

Students who initiate research tasks, either with a master's or doctoral thesis, often find deficiencies in their training that make the research process more difficult (Wang and Li 2011). Research supervisors also expose this situation. While master's or doctoral students receive the support of their research supervisors in the process of research training, a balance between the supervisor's accompaniment and the development of autonomy as a researcher is crucial. In addition, common issues regarding the thesis arise among researchers during training. As a result, researchers explore support possibilities available on the Internet. Examples of this type of support are online communities, such as the #PhDChat generated on Twitter (Ford, Veletsianos, and Resta 2014), or specific communities, for instance *CoVIF* (a learning

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community for researchers in training in the field of educational technology; Moreno and Salinas 2011). The use of Open Educational Resources (OER) as a possible source of content has not yet been exploited to address the shortcomings or the need to deepen knowledge in certain aspects of research training. The *Open and mobile educational resources for educational researchers training* project, carried out by several universities in Mexico, focused on the creation and use of an OER repository of mobile learning for educational researchers during training, it resulted in the production of 37 mobile OER and the development of a digital repository to lodge them (Ramírez and Burgos 2012). No study has focussed on identifying the existing OER, and making them available to researchers during training in any field. Such a study would need to consider that OER are not always easy to locate or recover (Atenas, Havemann, and Priego 2014), and that opportunities discussed around OER, especially those related to universal access to education have not been realised (Caswell *et al.* 2008). A study locating OER also needs to consider the discussions around the quality of these resources and how to evaluate that quality (Camilleri, Ehlers, and Pawlowski 2014).

This research aims to select and collaboratively evaluate digital educational resources, especially open but not exclusively, and make them available to researchers during training. For this purpose, both the needs expressed by researchers during training and the existing criteria and instruments in the field of the evaluation of educational resources are considered. This effort is a part of an Ibero-American inter-institutional project (*Investiga+*) led by the Autonomous University of Bucaramanga (UNAB, Colombia), which is oriented towards the strengthening of postgraduate research (Orellana *et al.* 2016). Based on the fact that there is a growing number of master's and doctoral students worldwide (Association of Universities and Colleges of Canada (AUCC) 2011; Ministerio de Educación Nacional (MEN) 2013; Snyder and Dillow 2013), *Investiga+* seeks to contribute to supervisors' training and practice. In this article we focus on researchers in training, although research supervisors could also benefit from the results of this work.

Framework

Training to be a researcher

According to Wisker (2012), research as a form of learning that values the creation and questioning of knowledge has become a central component of curricula throughout the world; the number of postgraduate and undergraduate students has increased, as has the number of research supervisors who are expected to encourage, support and train students to develop competencies, values and practices essential for research work.

Following are the responsibilities that Taylor, Kiley, and Humphrey (2017) attribute to effective supervisors in relation to the expected achievements of researchers in training: to allow the student to be able to start and plan a research project; to acquire research competencies necessary to accomplish research and have adequate access to resources; and to develop creative, critical and analytical skills. However, supervisors do not have to assume these responsibilities by themselves, but should provide guidance and academic support, and the institution is expected to be a facilitator of structure, policies, conditions and resources that enable supervision (Orellana 2016).

Remote supervision, either completely or partially using online communication, adds to the challenges of supervision. Despite these challenges of remote supervision, here are also advantages and opportunities. According to Sussex (2008), the same fact of using different forms of communication and information exchange increases the quality of supervision by making it richer and more flexible than without the combination of media. These advantages and opportunities can also be harnessed by face-to-face supervision supported by information and communication technology (ICT).

ICT also supports one of the main purposes of research training, that is, to achieve student autonomy as a researcher. According to Adham *et al.* (2018), the training of students as researchers is enhanced by their interactions within professional and social networks, self-study and self-reflection. In the same way, Caplan and Graham (2008) suggest viewing the web as more than a tool, and also as an aid in the creation of learning environments that promote active student-centred learning and support the development of critical and high-level thinking skills.

Within the frame of the *Investiga+* project, the current work promotes the creation of a website where digital educational resources for research training, especially open resources, are linked. This website facilitates autonomous learning, communication and interaction in cross-disciplinary and multicultural environments, especially in online education, although the resources could also be used in the context of face-to-face and blended learning.

Digital educational resources: learning objects (LO) and OERs

According to Fernández-Pampillón, Dominguez, and de Armas (2013), digital educational content or resources are

digital resources used in the teaching-learning process of the courses taught by teachers or the collection of resources that a teacher or a student uses to pursue a course: a lesson plan, a calendar, the teaching guide, a proposal of activities, tutorials, ... [...] When the digital educational resource is created with the objective to be scalable, reusable, interoperable and accessible is considered to be a learning object. (Fernández-Pampillón, Dominguez, & de Armas 2013, p. 14)

Learning objects, as educational resources, are minimum units of information in multiple formats with an interactive nature, self-contained in the context of learning and oriented to a single objective through micro-learning units that include content, resources, activities and evaluation (Del Moral and Cernea 2005). They also present features of accessibility (identifiable through metadata), interoperability (technical compatibility of the resource among different platforms and devices), reusability in other contexts, adaptability to situations and needs, and durability in the face of technological changes (Del Moral and Cernea 2005). According to Camilleri, Ehlers and Pawlowski (2014, p. 7), LOs are ‘materials used to support learning (that) can be broken down into (or constructed from), a number of elements which can be combined differently and reused in various scenarios’.

When LOs, as minimum educational resources, are licensed with an open licence, they can be considered OER. The term OER was coined by the UNESCO (2002) and defined as ‘teaching, learning, and research resources that reside in the public domain

or have been released under an intellectual property license that allows their free use or re-purposing by others' (Atkins, Brown, and Hammond 2007, p. 4). OER as well as digital educational resources in general may include complete courses, course materials, modules or units, syllabus, books, research articles, videos, evaluation tools, interactive materials, databases, software, applications and any other useful educational material (UNESCO and Commonwealth of Learning (COL) 2011). It is widely agreed that OER can offer great educational possibilities, especially for the developing countries (Kawachi 2014), but their potential in distance education and in research training, through the reuse and sharing of digital educational resources, can be also considered (Ramírez and Burgos 2012).

OERs are openly available, often accessible through educational or institutional repositories but not always easy to find or retrieve (Atenas, Havemann, and Priego 2014). Likewise, just as the use of OER is open to any person, so is the creation of new OER, and therefore the pedagogical, technical and content quality can be variable, and educators might have problems judging the OER quality and relevance (Hylén 2006). In comparison to commercially published resources, which follow traditional peer review, licensing and publication (Wiley 2013), there are still doubts about the OER quality, which can be managed through different (centralised/decentralised; open/closed) processes (Hylén 2006).

As a main part of our study, it is a key to review what the literature proposes in relation to the quality of digital educational resources, primarily OER.

Ensuring the quality of digital educational resources

Quality is one of the most discussed topics in the field of digital educational resources (especially OER), and also one of the considered reasons why these resources are scarcely used (Camilleri, Ehlers, and Pawlowski 2014). The same authors also emphasise that the potential of OER to transform the educational practice has not yet been exploited; and that innovative ways are needed for the creation and evaluation of OER, as well as an evolving empirical database on OER effectiveness.

In order to assess and evaluate OER, and other educational resources, Camilleri, Ehlers, and Pawlowski (2014) propose a social qualification where the evaluators are the users, and the results of the evaluation are available to other users of resources. According to McGill (2011), the quality of educational resources is usually determined by their accuracy, the reputation of their author/originated institution, the technical production standards, the accessibility and the suitability for specific purpose.

On the other hand, there are different approaches to the concept of quality, which include generic perspectives of quality related to quality management or quality assurance without taking into account the context of use, specific quality perspectives for learning, education and training (e.g. standards and guidelines to ensure quality in the European higher education area or UNIQUE criteria for excellence in technology-enhanced learning), and specific instruments for quality assessment (e.g. recommendation systems or peer reviews; Camilleri, Ehlers, and Pawlowski 2014).

These instruments could be ratings, rubrics or frameworks and facilitate the evaluation and selection of digital educational resources (MERLOT, the Learning Object Evaluation Instrument and the Rubric to Evaluate Learner Generated Content, among others). In studies by Yuan and Recker (2015) and Zawacki-Richter and Mayrberger (2017), detailed analyses of these instruments were carried out, including a comparison and evaluation of their elements.

Both studies point towards the Learning Object Review Instrument (LORI) (Nesbit, Belfer, and Leacock 2007) as one of the most easily accessible evaluation instruments. LORI has also been reviewed for several times and there are examples of empirical results of its implementation (Yuan and Recker 2015; Zawacki-Richter and Mayrberger 2017). Resting on the evidence from these studies, LORI appears to be one of the most valid instruments for evaluating LOs and also the most inclusive in terms of the quality criteria or dimensions described in Zawacki-Richter and Mayrberger (2017) -- technical, pedagogical and intellectual property rights – and the Spanish Standard UNE 71632 (quality criteria for digital educational materials; Fernández-Pampillón Cesteros *et al.* 2017) -- pedagogical effectiveness, technological effectiveness and effectiveness regarding accessibility. LORI is designed for individual or collaborative evaluation of multimedia LOs, although it can also be used in a generic way for LOs with other formats.

LORI comprises nine items, which can be specified when evaluating the educational resource, according to the mentioned quality criteria or dimensions (Table 1).

For each item, a rating of 1 to 5 stars is established, meaning 1 is the lowest score and 5 is the highest. Examples of what is meant by assigning 1–5 stars to each of the items are specified in LORI.

In an effort to create an integrated platform for LO evaluation, LORI and other evaluation instruments (e.g. UNE 71362 or the Learning Object Evaluation Metric) have been included in the Learning Evaluation Object Platform (LOEP). This platform facilitates collaboration in the evaluation of educational resources, and generates automatic scores derived from that joint evaluation (Gordillo, Barra, and Quemada 2015). LOEP is an important tool for the current study, since it provides an organised system for the allocation of assessment of educational resources, and produces summary representations of their quality according to different instruments. These features are the reasons why LOEP and the integrated LORI were used in this study for the collaborative evaluation of educational resources, ensuring quality criteria in the process and outcome of the process.

Table 1. Quality items of learning object review instrument according to the quality criteria and dimensions.

Quality criteria (Zawacki-Richter and Mayrberger 2017)	Quality dimensions (Fernández-Pampillón Cesteros <i>et al.</i> 2017)	LORI items (Nesbit, Belfer, and Leacock 2007)
Technical (usability, accessibility and reusability)	Technological effectiveness	Presentation design Reusability Compliance with standards
	Effectiveness regarding accessibility	Accessibility Interaction usability
Pedagogical (content, learning design and evaluation)	Pedagogical effectiveness	Content quality Alignment of learning objectives Motivation Feedback and adaptation
Intellectual property rights (license)	-	-

Methodology

Research objectives

As a major purpose of the *Investiga+* project, a range of digital educational resources (existing and newly created) are expected to put at disposal of researchers during training. These resources include content related to the design and development of a research project.

The objectives of this study contribute to the above-mentioned major purpose of the *Investiga+* project and are specified as follows:

1. To identify the relevant elements of structures and topics of digital educational resources for research training derived from the needs of researchers in training and the related literature.
2. To collaboratively evaluate and select existing digital educational resources according to the established quality parameters suitable for research training.

Therefore, following would be the research questions:

1. Which elements of structures and topics of educational resources are relevant for researchers during training?
2. How appropriate, in terms of their quality, are the existing educational resources to be used in research training?

Phases of the Study

The study has been divided into different consecutive phases (see Figure 1), starting with the literature review and data collection regarding elements of structures and topics of digital educational resources carried out through questionnaires and interviews with researchers in training. After this first identification of educational

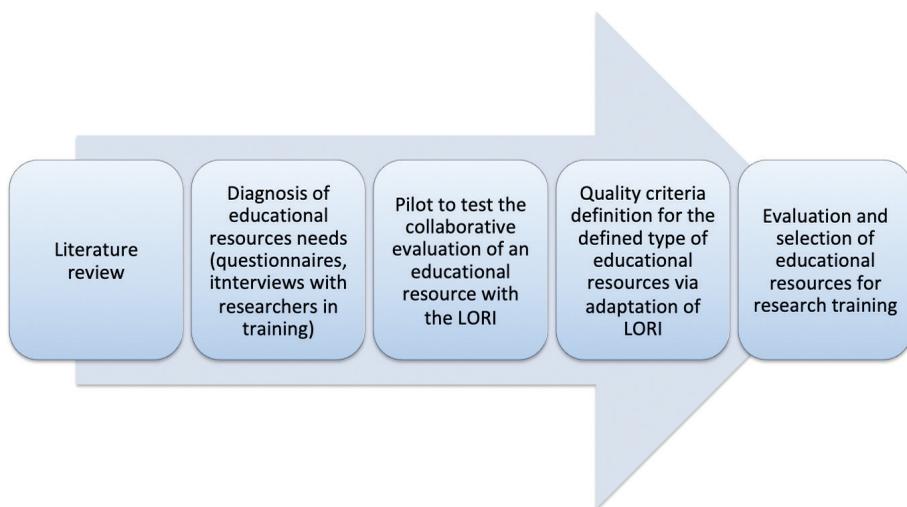


Figure 1. Phases of the study.

resources' needs for researchers in training, a pilot phase to test the collaborative evaluation was completed through the use of the LORI instrument. This allowed us to define elements of quality for an educational resource in the context of research training and, consequently, to generate some consensus around the use of LORI for collaborative evaluation, which took place thereafter. These quality criteria are also the basis for the definition of an appropriate techno-pedagogical structure for the educational resources that are created in a later stage of the project (future work).

The study was approved by the university's Institutional Committee of Ethics in Research (code 062).

Instruments

As part of a larger study, a mixed methodology was used in the initial analysis: Online questionnaires were administered to research students in master's and doctoral programmes in Ibero-American universities, and online interviews were conducted with research students who voluntarily offered to be contacted in the online questionnaire. The questionnaire was validated by experts through the International Research Panel in Educational Technology (<http://www.edutec.es/panel>).

The questionnaire included many items, but only the ones that concerned specific objectives of this study are presented.

In the case of the questionnaire, the selected items were as follows:

- Classify in the order of priority from 1 to 5 different types of educational resources (e.g. self-contained course) to be considered in the design of support resources for research training.
- Select five topics of educational resources required for research training (e.g. methodological aspects).

In both items, the research students were given the opportunity to include supplementary options. In the interview, the researchers during training delved into the characteristics of digital resources considered to support research. In addition, they explained their reasons for choosing specific topics of digital resources for research training.

The next phase in the study included the use of LOEP by project researchers to evaluate an educational resource and the subsequent discussion on the suitability of each item from the context of research training and the type of LO found. Based on the agreements for the use of LORI, the project researchers proceeded to the collaborative and quantitative evaluation of educational resources. These resources were previously selected from 34 educational and institutional repositories, catalogues and Massive Online Open Courses (MOOCs), mostly in the Spanish language, according to the target group.

Results and discussion

As indicated above, several instruments have been used in this study that produced sets of results in each of the study phases. In this section we present these results by dividing them into: (1) a summary of the analysis of the needs of researchers during training, and (2) the work developed by project researchers regarding the revision of LORI and the evaluation of educational resources through LOEP.

Analysis of researchers in training's needs

A total of 142 postgraduate students from 15 Ibero-American countries participated in the questionnaire aimed at discovering how to strengthen the master's and doctoral programmes at Ibero-American universities. The majority (60.57%) of participants came from Colombian universities.

When researchers during training were asked about their preference regarding the type of educational resources, they classified them as follows: first of all, virtual courses arranged in a platform allowing for student–content and student–student interaction; in the second place, self-contained courses with self-evaluation options and activities, and with the choice of a student–content interaction; and finally in third place, interactive resources in multimedia format.

The interviews were conducted with a small sample of research students ($n = 6$), who described the following statements as important characteristics of digital resources for research training:

1. *Openness*. Digital resources must be fully open in digital format and accessible to the entire community.
2. *Up-to-date*. Obsolete tools should be avoided.
3. *Availability in a single platform*. It is important to be able to access the resources whenever wanted or needed, and not only through specific courses.
4. *Quality material*. With relevant contents.
5. *Disposal of a clear and broad structure*. This covers the important aspects of contents.
6. *Accessibility through different devices*. Universal design should be also considered.
7. *Format of LO and training capsules*.
8. *Offer of dynamic assistance and interaction support*.

Once the project team reviewed and discussed the results, the outcomes were refined taking into account the literature and the specificities of the target group. In conclusion, digital resources to be selected (and eventually created) to support the research training must encompass the following characteristics:

- Interactive and audio-visual/multimedia format.
- Format of training pills/capsules or LOs, e.g. interactive videos.
- Adaptive (accessible from any device).
- Quality based on the evaluation of the material before its development by designers/researchers, and after its development by research students and supervisors.
- Promotion of interaction with other research students and supervisors in a chat, forum or video conference format (dynamic assistance); for instance, through activities.

Regarding the topics of digital resources, the analysis of the answers of questionnaires and interviews involved the consideration of seven topics aimed at researchers in training. Codes needed for the subsequent labelling of resources were assigned to them: (1) research methodology and structure of research projects (MET), (2) tools for information management, reference managers and citation styles (GEST), (3) ethical aspects (ETI), (4) scientific writing and scientific publication process (ESC),

(5) preparation for research process (PREP), (6) examples of research practices in disciplinary fields (EJE) and (7) use of knowledge management tools (CON).

Collaborative evaluation of educational resources

As mentioned above, the researchers also identified quality elements for the evaluation of educational resources suitable for research training, which also provided clues for the techno-pedagogical structure to be proposed for the future creation of new resources.

With that purpose in mind, several project researchers made use of LORI to collaboratively evaluate an educational resource that had been previously selected from a list of repositories, catalogues and MOOCs.

This initial evaluation resulted in a series of agreements regarding the use of LORI in the next evaluations of educational resources, which would contribute to a homogeneous evaluation among the project researchers involved in this process.

Agreements for the use of LORI

In a pilot phase to test the evaluation of selected educational resources, the evaluated resource was a video belonging to an MOOC about the aspects of research methodology.

The result of the collaborative evaluation work conducted by four project researchers is shown in Figure 2. Considering that each item could get a score between 1 and 5, the evaluation was generally positive, with its maximum score in terms of standard compliance, accessibility, interaction usability, and presentation design (at the left side of Figure 2, from top to bottom). The content quality and reusability items (at top and left side of the figure) also obtained a high score, although not the maximum score (between 4 and 5). At the right side of the figure and from top to bottom, learning goal alignment, feedback and adaptation, and motivation are the items that obtained an average score. In addition to rating, each project researcher included notes in the open text field, which were discussed later in an online meeting.

It was agreed that most items would be maintained. However, different considerations were made for the use of LORI in subsequent evaluations, partly due to the type of resources that were mostly found (videos from MOOCs):

- *Learning goal alignment*: We agreed that we would focus on the definition of a general learning objective regarding the project proposal (to strengthen research training in aspects related to the development of a research project) instead of concrete aspects (e.g. a specific qualitative methodology, or a special tool to analyse data). The aim with this agreement was to avoid narrowing the selection and creation of digital educational materials.
- *Feedback and adaptation*. In the case of educational resources in video format, and as long as they are not interactive, this item would get a score of 1, meaning that this quality aspect is not present.
- *Motivation*. This quality aspect should be evaluated considering how the expert presenting in the resource generates interest in the learner (e.g. mental challenge, changes in tone, mood and presentation format).

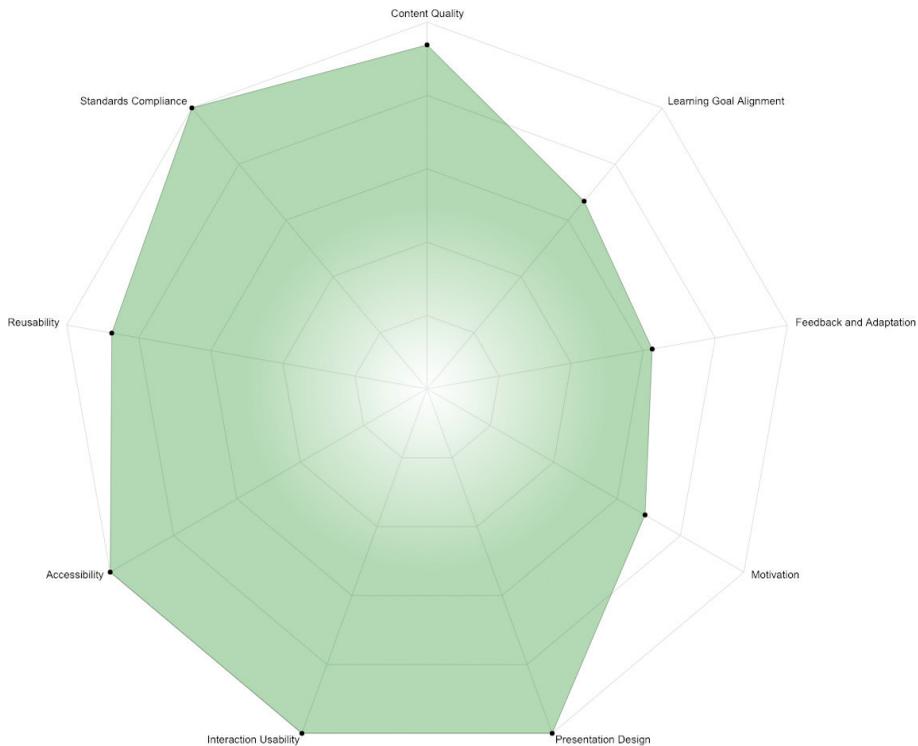


Figure 2. Graph derived from the collaborative evaluation of educational resource using LORI in LOEP.

- *Interaction usability.* We would refer to usability of the educational resource itself, and not of the platform where the resource is published (e.g. the video, instead of the YouTube platform).
- *Accessibility.* The item would be evaluated with a high score if the resource has subtitles/transcription (it could be differentiated between automatic and human), and if a version of the resource for mobile devices is available.
- *Reusability.* The possibility to reuse the resource in diverse disciplines would be considered in its evaluation for this aspect (e.g. a video about quantitative methodology procedures suitable for educational sciences and health sciences).

Regarding the item ‘Standard Compliance’, it was difficult to identify whether standards were followed in most of the selected resources, and therefore this item was not used in this evaluation. It was agreed that this item should be considered in subsequent creation of new resources. This item would include the following information on three aspects: (1) technical, with information about requirements and technical characteristics of the content; (2) educational, considering descriptions of pedagogical and educational characteristics of the content; and (3) rights, which refer to information about intellectual property rights and terms and conditions of use of the content.

Results of the evaluation of educational resources

The search for educational resources in 34 repositories, MOOCs and catalogues guided by the ratings (discussed above) resulted in a final selection of one to five resources in each of the previously identified seven important topics for research training, although in some exceptional cases these limits were exceeded.

Thirty-two educational resources -- mostly but not exclusively, videos, were labelled with a code and a number according to the topic, and included in LOEP. Always two project researchers evaluated each resource that was not selected by them so that a double evaluation was ensured for each resource.

The evaluation team agreed on an average cut-off score of 7.5 in collaborative evaluation. This cut-off score was used to determine the inclusion of educational resources based on their quality. The automatic calculation of this arithmetic average of LORI by LOEP was done according to a mathematical equation that leads to the items being averaged taking into account all the evaluations made and then transformed into a score on a scale of 0-10 (Gordillo 2017). This resulted in the positive assessment of 17 educational resources.

A summary of the LORI averages of the selected resources' evaluations calculated by LOEP is presented in Table 2. Figures 3 and 4 show the representation of the evaluation of a resource with a low and high score respectively.

Conclusions and the future work

The quality assurance process for the evaluation of digital educational resources presented in this study has resulted in selecting good-quality materials for research training, which can, eventually, be also an additional support for research supervisors. As Wiley (2013) suggested and we would also like to remark again: 'Quality is not necessarily a function of copyright status [...]. Local experts must vet the quality of whatever resources they choose to adopt [...]'.

Furthermore, the current work shows the importance of sharing criteria for the collaborative evaluation of educational resources, especially in the case of international research groups working remotely together in a project.

We recognise that platforms, such as LOEP, greatly facilitate collaborative evaluation processes and minimise the effort of evaluation. We also recognise that LORI is an appropriate evaluation approach in determining which resources are of suitable pedagogical and technical quality. In addition, other dimensions such as support in the choice of relevant criteria for each type of resource and more guides for evaluation could be of great value: In the first place, for education professionals, to decide on the resources to be used in their courses and, eventually, for other professionals that may not be involved in the education area but need resources in their fields of knowledge for their own professional development. Sharing the results of evaluation with a working group (reviewers and administrator) could also be an opportunity for open discussion within the team.

We emphasise from our research the importance that the authors of educational resources label them explicitly as OERs wherever appropriate and describe their metadata, especially the type of licence. It is also relevant that the repositories and catalogues of educational resources take greater care in providing a clear resource classification and updated links. Some of these difficulties were also mentioned by Atenas, Havemann, and Priego (2014), and therefore Atenas and Havemann

Table 2. Average LORI rating of educational resources evaluated in LOEP according to each topic (automatically calculated by LOEP).

Educational resource according to the topic	Arithmetic average of evaluation LORI
MET1	8.66
MET2	8.61
MET3 = GEST1	8.19
MET4	5.28
MET5	4.03
GEST2	5
GEST3	7.92
GEST4	6.76
ESC1	9.17
ESC2	8.89
ESC3	8.61
ESC4	5.56
ESC5	9.31
ESC6	7.22
ESC7	7.64
ESC8	7.36
EJE1	4
PREP1	5
PREP2	8.61
PREP3	5.42
PREP4	7.5
PREP5	9.17
CON1	7.64
CON2	4.44
CON3	6.11
CON4	8.47
ETI1	8.33
ETI2	7.22
ETI3	6.94
ETI4	8.06
ETI5	8.33

(2013, 2014) established quality assurance indicators for repositories, such as the inclusion of keywords in incorporated resources or the availability of user evaluation tools. The latter is a very useful aspect, especially when that evaluation may be available to others.

The contribution of this study to the existing literature lies especially in the collaborative evaluation of educational resources for research training, and based on multiple perspectives, namely the analysis of the needs of researchers during training, the joint analysis of a broadly recognised evaluation instrument (LORI), and the use of its items to ensure the quality of those resources. In addition, this work represents a contribution to the field of OER for the target group of researchers in training, especially in the Spanish-speaking world.

We recognise some limitations of this study in its different phases. Firstly, the samples in the analysis of needs, which were of a voluntary nature, coincidentally came mostly from Colombia, which may imply that needs in terms of topics and

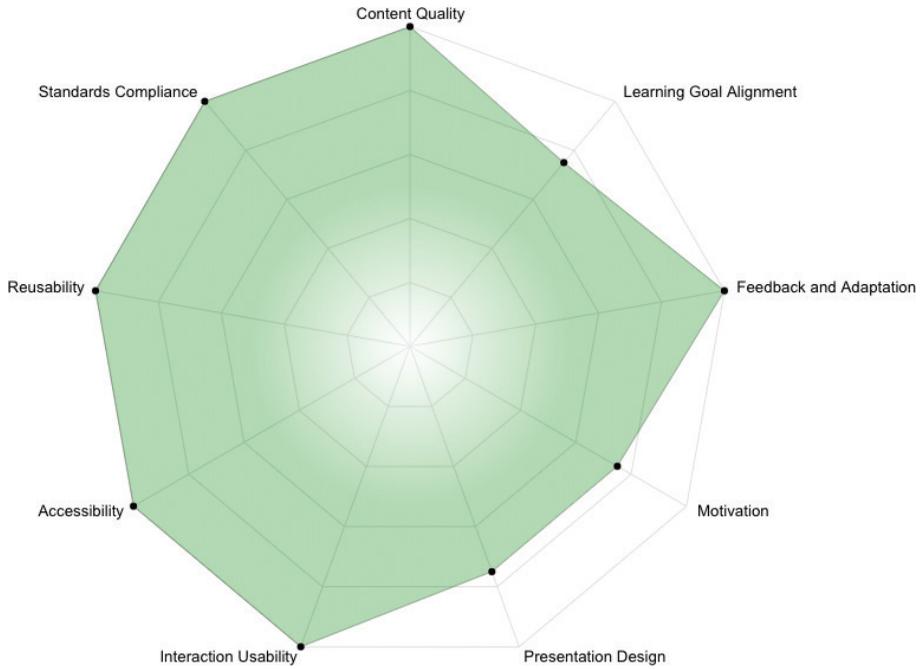


Figure 3. Score graph of ESC1 (positive).

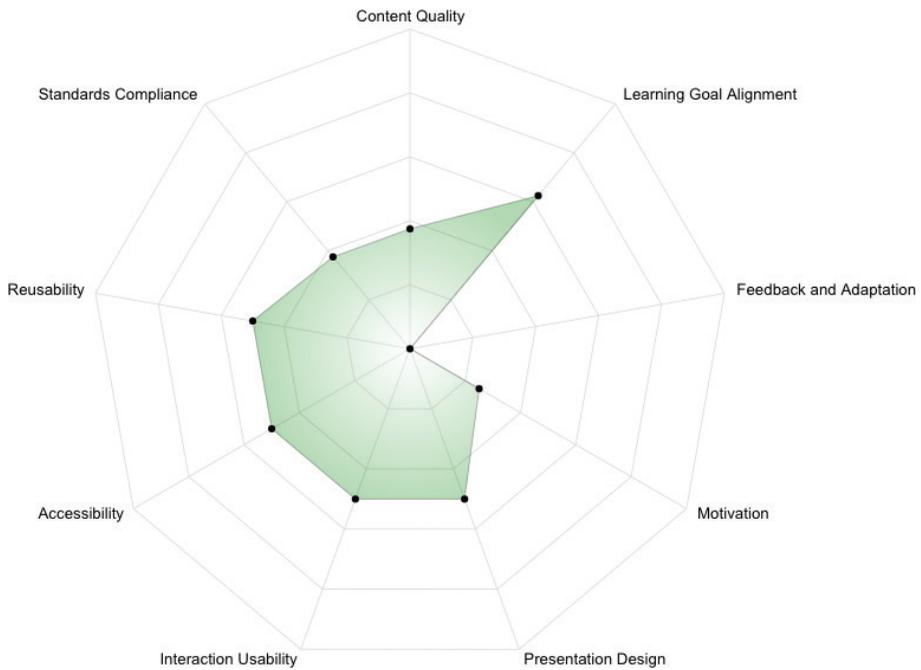


Figure 4. Score graph of MET5 (negative).

types of educational resources for research training cannot be generalised. Perhaps a more detailed analysis of the reasons for this geographical bias would be necessary. Secondly, we must also mention incompleteness in the creation of the list of repositories, catalogues and MOOCs used during resource selection. It was not always possible to locate them all, for example, because they were no longer available. Finally, it is worth mentioning that in the collaborative resource evaluation there was a limitation in time and personal resources related to the number of resources to be evaluated and the number of researchers involved in the evaluation of each of them. Although a community of appropriate peer reviewers is desirable, perhaps solutions that combine this community-based model with other kind of measures could make the (collaborative) evaluation of OERs more feasible and sustainable. As proposed by Orr, Rimini and Van Damme (2015) for developing OERs, some examples could be as follows: generating revenue from additional services related to the evaluation of OERs (revenue-based model) such as an evaluator certification; further training as evaluator of OERs or counselling services on further user/reuse of those OERs; or involving philanthropic organisations to support the quality of OER by offering donations and funding the evaluation of OERs (philanthropy-based model).

The next phases of this study include a second round of identification and evaluation of educational resources, creation of new resources related to topics where no OER exist, and the development and evaluation of an open website with high-quality resources evaluated and oriented towards researchers in training and research supervisors.

The website is currently under development and will involve the evaluation of the actual use of the selected and created resources by researchers in training. This evaluation of the use of educational resources by the target group in the website should be especially considered, as presented by Canto, Guillermo, and Tejada (2012). This would allow triangulating evaluations from the point of view of project researchers and from actual users.

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