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Guidelines for Leveraging University Didactics Centers to Support OER Uptake in German-Speaking Europe

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Abstract: Although less well established than in other parts of the world, higher education institutions in German-speaking countries have seen a marked increase in the number of open educational resource (OER) initiatives and in government-supported OER funding in recent years. OER implementation, however, brings with it a unique set of challenges in German-speaking higher education contexts, stemming in part from copyright laws and use permissions that have made sharing and reuse of educational materials less prevalent. The article discusses how instructional

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development centers, including university didactics centers (*hochschuldidaktische Zentren*) and e-learning centers, can play a key role in faculty uptake and adoption of OER, and concludes by proposing a set of OER implementation guidelines that leverage the expertise and interfacing role of these centers in German-speaking countries.
Keywords: higher education; educational media; educational technology; distance education; instructional materials and practices

Directrices para aprovechar de la didáctica universitaria para apoyar la implementación de REA en Europa Germano-hablante
Resumen: Aunque menos establecido en otros partes del mundo, los contextos de educación superior de habla alemana en los últimos años han visto un marcado incremento del número de iniciativas y financiaciones por parte de gobiernos vinculadas a los recursos educativos abiertos. La implementación de los REA, sin embargo, conlleva una serie de retos únicos para los contextos de educación superior germano-hablante derivados en parte de las leyes de copyright y permisos de uso que han hecho que el reparto y la reutilización de materiales educativos sean menos frecuentes. El artículo aborda cómo los centros de instrucción, incluyendo los centros de didáctica universitaria (*hochschuldidaktische Zentren*) y los centros de e-learning, pueden tener un papel fundamental en facilitar el uso y la adopción de REA y concluye proponiendo un conjunto de directrices para la aplicación de REA que aprovechen la experiencia y la interconexión de estos centros en países germano-hablantes.
Palabras clave: educación superior; medios educativos; tecnología educativa; educación a distancia; materiales de instrucción y prácticas

Diretrizes para aproveitamento a didática universitária para apoiar a implementação de REA em Europa de Língua Alemã
Resumo: Ainda que é menos estabelecido em outros partes do mundo, nos últimos anos os contextos da educação superior em alemã têm tido um aumento marcado no número de iniciativas y financiamento pelo parte dos governos ligados aos recurso educacionais abertos. A implementação dos REA porem inclui uma série de desafios únicos para os contextos de educação superior em alemã, derivados em parte das leis de copyright e permissões de uso que tem o efeito que o compartilhamento e reutilização de materiais educacionais sejam menos frequentes. O artigo discuta como os centros de ensino, incluindo os centros de didáctila universitária (*hochschuldidaktische Zentren*) e os centros de e-learning, podem ter um papel fundamental em facilitar o uso y implementação de REA e termina propondo um conjunto de diretrizes para a aplicação de REA que aproveitem da experiência e interconexão destes centros em países de língua alemã.
Palavras chave: educação superior; meios educativos; tecnologia educacional; educação a distância; materiais de ensino y práticas

Introduction

Compared to the open educational resources (OER) movement in the English-speaking world, OER in German-speaking higher education contexts is not as well established. However, the last few years have seen a marked increase in the number of OER initiatives in German-speaking contexts (Arnold, 2012). In 2006, the European Commission co-financed the first project on OER, the Open e-Learning Content Observatory Services (OLCOS), which led to the first German language conference on OER in 2008 in Salzburg, Austria. In 2013, the first German OER

conference was held in Berlin. More recently, direct, state-based funding was made available to OER projects in higher education--through an allocation of 2 million euros to OER research and OER initiatives by the German ministries of education in 2015.

German-speaking countries in Europe—*viz.* Germany, Austria, and parts of Switzerland and Italy—have also, over the last decade, witnessed the emergence of several initiatives to create and make OER available to educators and learners. For example, Jörg Loviscach at the University of Applied Science-Bielefelda has been publishing a collection of Creative Commons licensed lectures on YouTube since 2000. In 2012, the University of Technology-Darmstadt developed a central OpenLearnWare-Platform for hosting its collection of more than 1,000 open learning objects. In Austria, Graz University of Technology provides access to a collection of its open educational resources, including recorded lectures, which are also available via iTunesU.

Other examples of resource initiatives include Imoox.at, a platform for MOOCs (massive open online courses) launched in early 2014 and hosted by Graz University of Technologies and the University of Graz. Additionally noteworthy is the collaboratively written, award-winning textbook on technology-enhanced teaching and learning that has been freely available for download since 2011. The textbook leveraged a crowdfunding business model and "book sprints" that brought together over 260 participants to create the book in seven days (Alimucaj et al., 2014; Kaltenbeck, 2011; Schön, Ebner, & Lienhardt, 2011). In addition to resources and platforms, special interest groups (SIGs) around OER have also emerged, including a collaborative SIG founded through the Swiss academic association, EduHub, to advise Swiss higher education institutions (HEI) on OER use and implementation.

The notion of free access to teaching and learning resources is valued in German-speaking Europe, as evidenced by public funding for most universities, which allows university students to pay either no fee at all, or only a small fee, to enroll. In the absence of fees, the cost-savings typically associated with the use of OER is not considered a means for attracting or retaining students in higher education. Yet there is recognition that OER offerings can enhance the public image and reputation of universities, and therewith play an important role in attracting public funding (Kopp, Ebner, & Dorfer-Novak, 2014).

In spite of the recognized benefits of OER, the self-governing nature of public universities in German-speaking Europe may inhibit OER implementation. In particular, because academic freedom is highly valued in institutions of higher education, it is not possible to mandate that faculty members use specific materials, adopt certain practices, or teach in any specified way. Furthermore, research expertise is valued more highly than expertise in curriculum development or in teaching, so achieving excellence in teaching, as may be demonstrated through OER development, is not a priority for faculty.

Perhaps the most important factor for consideration in the uptake of OER by faculty in German-speaking Europe is the fact that published content is protected by copyright law without exception; public domain materials and materials used in other countries under fair use are by law prohibited in higher education institutions. Therefore, teachers cannot use content copyrighted by others in lectures, presentations, or in a learning management system in courses in higher education. While under certain restricted circumstances, there are limited opportunities to make paper and/or digital copies, copyright is always bound to the creator, and copyrighted materials cannot be used in the absence of explicit permission, terms of use, or licenses that are specified by the copyright holder. The stringency of copyright laws in German-speaking Europe has resulted in widespread use of Creative Commons licenses (including the "CC 0" option, which is equivalent to public domain in the United States and other countries) to enable open access to educational resources.

These legal issues are seen as a key driver for the uptake of OER in higher education: where there is no legal alternative to using existing materials, OER presents opportunities for educators to use, repurpose, and remix other instructors' materials. However, copyright laws in German-speaking Europe have also made the practices of sharing and repurposing educational materials less prevalent among academic staff because without a baseline for using others' materials as a starting point, OER uptake may be effectively inhibited. To begin to develop these practices, faculty members need time, skills, and support to produce learning materials and publish them as OER, or to integrate existing OER in their courses.

In light of these challenges, this article proposes and discusses an OER strategy within the context of HEI in German-speaking Europe. The article first addresses the OER movement in higher education, and the role currently played by centers such as *hochschuldidaktische Zentren* and "E-learning Centers." These centers are similar to centers for instructional support services at English-speaking institutions of higher education, which are responsible for faculty development and educational technology integration. The second half of this article discusses a strategy to realize the potential for these centers as key providers of support for OER uptake among HEI faculty in German-speaking Europe.

OER Opportunities for University Didactics Centers

A major barrier to the uptake and implementation of OER is the lack of knowledge among faculty members regarding legal, technical, and pedagogical issues surrounding the use, modification, and provision of OER. In this context, centers of faculty development, and especially those dealing with educational technology, can play an important role in the OER movement. In German-speaking universities, all aspects of teaching and learning related to faculty development are embodied in centers for *Hochschuldidaktik* (translated as "university didactics"). One of the largest centers for university didactics in German-speaking Europe is at the Technical University of Dortmund. More recently, "e-learning centers" have emerged to support the integration of media in teaching and learning. One such center, the Learning Lab at University of Duisburg-Essen, operates a media lab as part of its technological support for teaching and learning. Occasionally, centers for university didactics serve all of the higher education institutions within a geographical area, such as greater Berlin or the state of Hessen.

Faculty development programs offered at centers for university didactics and e-learning often focus on aspects of pedagogy, technology, and curriculum or course design for faculty (Bergquist & Phillips, 1975; Caffarella & Zinn, 1999; McKee, Johnson, Ritchie, & Tew, 2013; McKee & Tew, 2013). The literature on faculty development cites the crucial role played by centers for university didactics in support of faculty whose multiple roles and responsibilities might prevent them from educating themselves about current approaches to teaching and curriculum (Austin & Sorcinelli, 2013). In addition to faculty development, centers for university didactics and E-learning also provide technological support for student research projects, as well as assuring the technical accessibility of course resources and their compatibility with mobile devices. Supporting learning among faculty and students, such centers are well positioned to facilitate the integration of OER into teaching and learning.

Maurek and Hilzensauer (2011), in their examination of the educational programs and training workshops on digital literacy and competencies in German-speaking Europe, note that OER is not yet a topic addressed within these programs, although the topic could be integral to existing training content focusing on, for example, copyright issues or the use of video and photos in teaching (Maurek & Hilzensauer, 2011). The inclusion of training workshops in OER use and

production within faculty development programs can apprise educators of the legal, technical, and pedagogical issues surrounding the use, modification, and provision of OER. In the process, they can promote the integration of OER into the HEI curriculum, thereby expanding the availability of quality resources for teaching and learning. From an organizational standpoint, it makes economical sense to leverage the expertise and interfacing role held by centers of university didactics or e-learning to exploit the benefits of OER on behalf of the HEI, its students, and faculty. A strategy for doing so is proposed in the following sections of this article.

Extending the Guidelines for OER in Higher Education

In 2011, the United Nations Educational, Scientific and Cultural Organization (UNESCO), in conjunction with Commonwealth of Learning (COL), published *Guidelines for open educational resources (OER) in higher education* (UNESCO & COL, 2011). The guidelines offer concrete strategies for integrating OER into higher education, broken down by key stakeholders and groups within the higher education context—from teachers and learners, to quality management administrators, to governments and policy makers. Absent, however, are centers for university didactics or e-learning, which are commonplace units in any typical higher education institution in German-speaking Europe. Responsible for technology enhanced learning, especially in regard to faculty development, university didactics centers are significant stakeholders for OER strategies in higher education in German-speaking Europe. These institutional centers occupy key positions: Their mission is to initiate and facilitate innovative developments in higher education, and they mediate between university management and faculty members.

Based on the topics and issues outlined in UNESCO and COL (2011), in conjunction with the stated missions specific to centers for university didactics or e-learning, the present authors drafted a set of revised guidelines for supporting an OER strategy by leveraging the didactics centers at institutions of higher education. The guidelines were subsequently shared with three experts who hold leadership roles within such centers—one each from Switzerland, Austria and Germany.

Guidelines for OER Strategy at University Didactics Centers

The guidelines presented here as an extension to the UNESCO and COL guidelines focus on implementation and support of OER, as well as its integration into teaching and learning through faculty development. Figure 1, below, outlines the three core strands, or fields of action, of the guidelines: internal measures, university-wide measures, and inter-university measures (see Fig. 1).

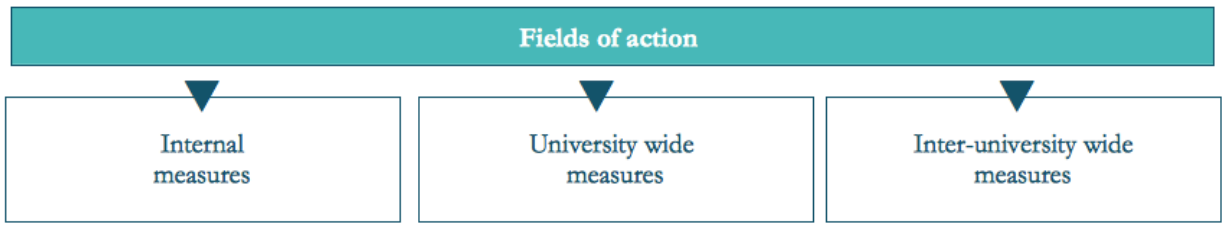

Figure. 1: Fields of action of OER implementation within university didactics centers

It is important to note that the ordering of the above-listed fields implies no particular sequence, and that the actions need not be implemented step-by-step; they may be implemented in parallel, and they are not independent from each other. Evaluation of the actions will contribute to

continuous improvement relating to strategic purposes, such as maximizing the impact of the introduction of OER. The sections that follow address each field of action in turn.

Guidelines for internal knowledge-building measures. Members of the in-house team must first develop their own skills and knowledge around OER in order to support others in producing and using OER. The guidelines for internal knowledge building measures, outlined in Figure 2, below, identifies steps for improving the skills and networking of the in-house team in regard to OER.

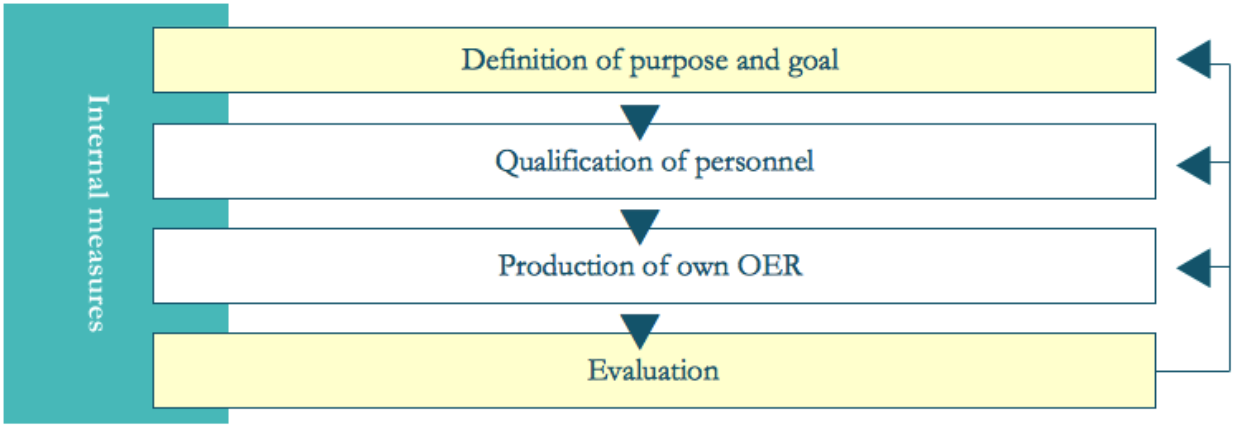

Figure 2: Guidelines for internal knowledge-building measures

Through the processes outlined in Figure 2, in-house personnel at university didactics centers become skilled and qualified in the theory and practice of OER prior to producing OER. To become qualified, personnel may take part in free online courses such as COER13.de, developed specifically for HEI didactic centers in German-speaking Europe. Furthermore, it is recommended that personnel also interact and share knowledge around their OER learning experiences with colleagues and others, as exchange and collaboration is central to OER. In addition, it is recommended that personnel also create and publish an open educational resource as part of their knowledge-building effort, with an appropriate license. The resource developed and published may center on any topic of interest to the individual.

Guidelines for university-wide measures. University-wide measures aim to assist key institutional stakeholders in the discussion toward developing a strategy that would become the basis for further OER initiatives. Guidelines for processes involved in university-wide measures are outlined in Figure 3.

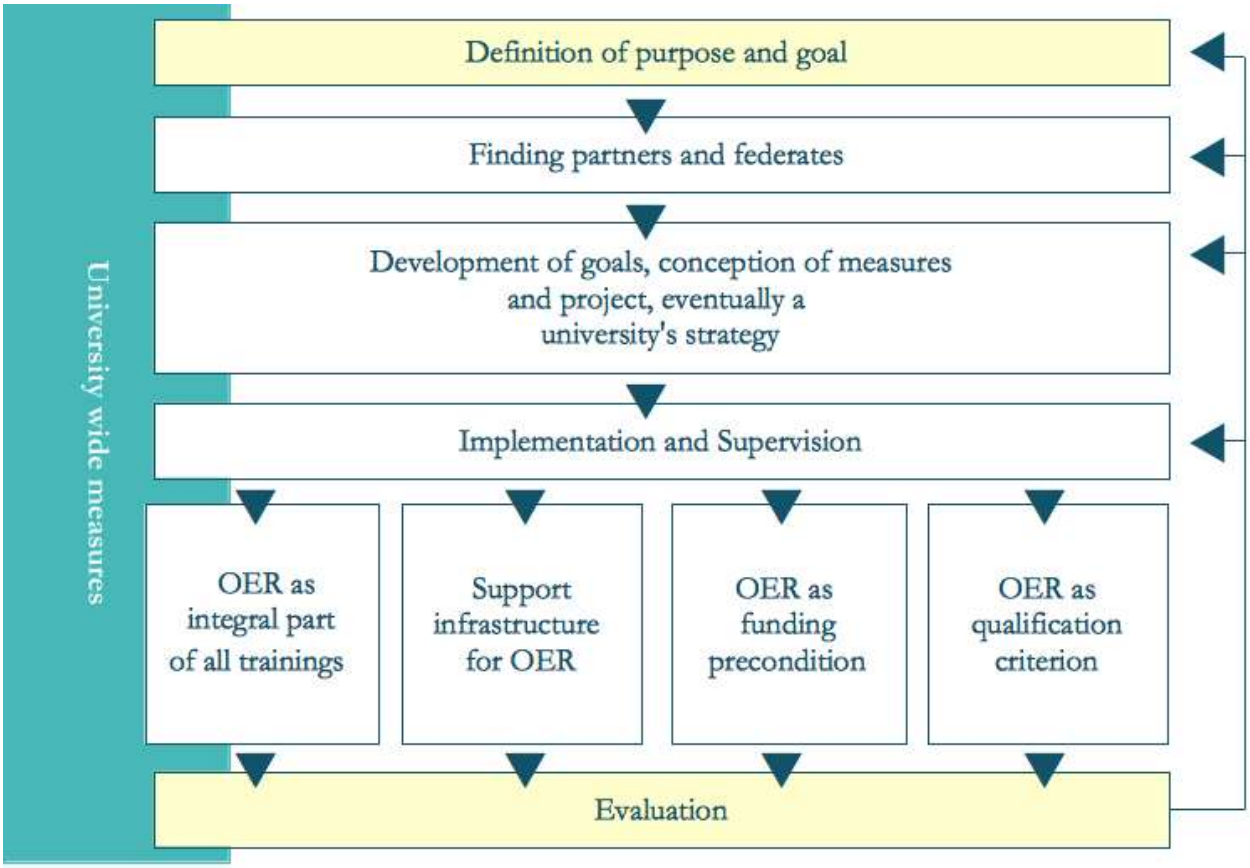

Figure 3: Guidelines for university-wide measures

In order to plan and conceive measures toward a university-wide strategy, the university must first consider its approach to OER and what the support structures will look like. The center for university didactics can act as a link between faculty members and university management in the process of developing a strategy. Additional potential partners for developing university wide measures include interested faculty who are already engaged in OER use, librarians, and deans of study (Okamoto, 2013; Reed, 2012). It is recommended that the first meeting among partners include a discussion of opportunities and challenges involved in implementing OER, as part of a larger discussion that engages partners and helps to ensure their buy-in.

At the outset, it is necessary to define the purpose and the goals of OER within the context of the institution. Based on identified and agreed upon goals, appropriate concepts and measures must be found. For example, OER may help to advance the institutional goal of promoting innovative forms of teaching and learning, which may be aligned with concepts of "education" or "open learning." OER may support exchange between institutions and/or individuals, which may align with concepts of "cooperation" or with inter-university measures to promote "open innovation." OER may help to identify new target groups, which may align with institutional measures to improve outreach. As a last example, OER may help to enhance the prestige of the university in the higher education sector, in alignment with public relations measures.

University-wide OER implementation strategy should prioritize OER as an integral part of the educational training for teachers and students. As explained earlier, the abundance of free learning materials available on the World Wide Web is of little use in German-speaking countries

where copyright laws prevent the use or copying of such materials for educational purposes. This is perhaps one of the most important reasons why OER must be included as an important aspect of university didactics services: A basic understanding of copyright, open access, and OER license models is essential to supporting the legal use of web content among faculty and students.

University-wide measures must also include considerations regarding the installation of an appropriate technical support infrastructure, which is a prerequisite for successful use of OER. Following their production, OER need to be published in centralized repositories. A repository platform adds metadata to each single object to enhance the discoverability as well as the exchange of resources. There are innovative web technologies called APIs (Application Programming Interfaces) that allow the direct access of third party applications to accelerate the exchange of data. Ideally, learning objects are designed to be exchanged not only countrywide but also worldwide. A number of standard models for metadata have been developed to foster the exchange of learning objects, most notably the Dublin-Core-Metadata and the IEE Learning Object Metadata-Standard, on which the *Österreichische Metadatenspezifikation für elektronische Lehr-/Lernressourcen* (Austrian Metadata specification) is based.

In order to facilitate the exchange of OER, it is important that university-funded projects or initiatives require the production and publication of OER employing standards enabling modification (for example simple TXT documents instead of PDF), as well as licenses that allow republication and modification (similar to the open access policy for scientific publications).

Promoted as a necessary teaching skill, OER creation and use can also provide valuable information regarding the quality of teaching. While text-based documents and videos may be only one indicator of good teaching, teaching materials that are available on the World Wide Web—their quality and popularity, as well as the number of reuses—can be included in criteria for high quality teaching. University didactics centers can foster quality products by supporting faculty in developing necessary skills for OER use and development. In addition, university didactics centers may offer awards to motivate faculty members to create quality OER.

Guidelines for inter-university measures. Finally, it is necessary that university didactics centers address inter-university measures, including exchange between universities, public relations, and publications. Figure 4 illustrates guidelines for these measures.

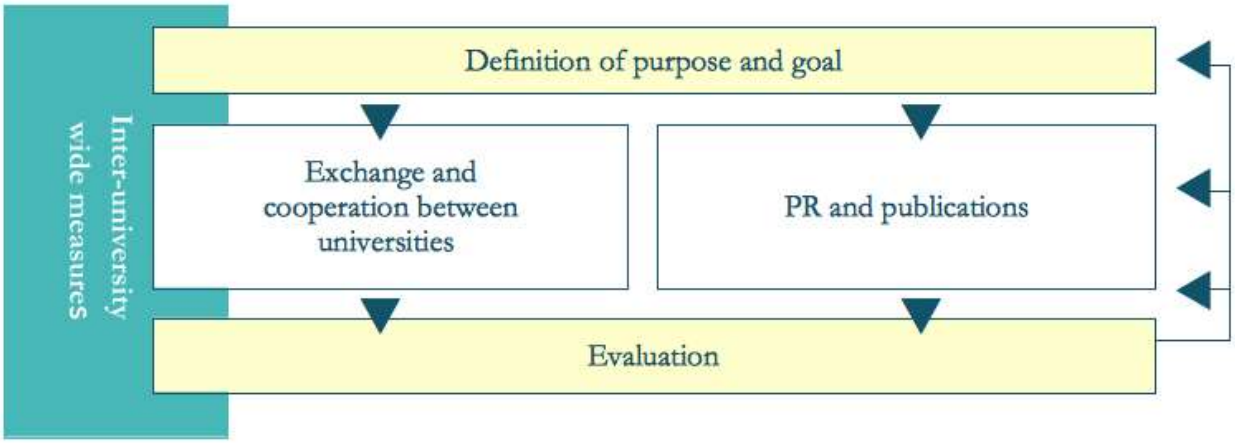

Figure 4: Guidelines for inter-university measures

University didactics centers should actively work on OER projects, and supplement that work through conference and seminar attendance, or involvement in related OER initiatives. Copyright issues that affect faculty in their teaching are of paramount interest as a topic for an inter-university conference or seminar.[1]

Conference and seminar attendance can play a central role in outreach and awareness building around OER, through public discussion of purposes and goals, as well as professional knowledge sharing around OER evaluation. Through such conduits, university didactic centers can inform other university programs and lecturers with regard to the teaching and learning benefits associated with OER.

Conclusion

This article has aimed to provide insight into the unique context and the possibilities for OER implementation in higher education institutions in German-speaking Europe. Having provided some basic understanding of that context, the article proposed a set of OER implementation guidelines that enlist the mission governing centers for university didactics or e-learning to support technology enhanced learning, especially in regard to faculty development. The proposed guidelines leverage the expertise and interfacing role inherent in these centers, developing the expertise of the HEI didactics center personnel toward supporting teaching and learning through university wide and extra-institutional measures for OER implementation.

Given existing copyright laws, OER will likely play an increasingly important role in higher education in German-speaking Europe in the future. Learners are well positioned to drive the movement, as they continue to search for resources and share them to support their learning. In parallel, debates and further work on copyright issues will strengthen institutional attention regarding OER, as witnessed by the increasing number of academic conferences and publications focusing on OER.

University didactics centers are not the only way to implement OER in higher education, and the proposal for OER strategy in German-speaking countries may not be applicable to other contexts. However, all higher education institutions with centers for instructional support or faculty development can avail themselves of the suggestions presented here, and adapt them to their specific contexts. Nevertheless, it is imperative that OER strategy at institutions of higher education include the participation of multiple stakeholders who work with faculty members, possess technical expertise, and are involved assuring the quality of teaching and learning resource materials.

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[1] In Austria, the association *Forum Neue Medien in der Lehre Austria* has a long tradition of examining copyright issues, as well as the topic of OER. In Germany, no such group currently exists, but may become possible in the future, in cooperation with the *Gesellschaft für Medien in der Wissenschaft* (Society for Media in Science).

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