



Are There Enough Open Educational Resources Dealing With Social Science Research Methods? Insights From the D-A-CH Region

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The D-A-CH (Germany, Austria, and Switzerland) region has traditionally been skeptical toward open educational resources (OER) materials. Despite being strong partners for the open science community, the three German-speaking countries in Europe did not embrace wide-reaching OER policies in the past and offered only a limited number of incentives for supranational or nationwide genuine German-language OER. These missing national initiatives can also be seen in the field of social science research-related materials. As the domain gained much public interest during the COVID-19 pandemic, where attitudes, values, and societal changes—traditionally the domain of social scientific inquiry—were spotlighted in the media and public discourse, it fell to individual universities, organizations, and people to provide free online education materials—be they true OER or at least quasi-OER—that could help people within and outside of academia to understand and gain insights into the statistics and data presented and distributed *via* various channels. However, mapping the OER materials in this field during the summer of 2021—1 year after the pandemic had begun and the accompanying stream of data had started—revealed that the educational resources covering social science research methods that are offered in the German language are sparse, and those that are available are mostly quasi-OER, not fulfilling all the typical OER criteria. Thus, they have limited application scenarios. If the region wants to truly embrace an open science policy, it needs to strengthen OER in future.

Keywords: open educational resources, social science research methods, mapping, Germany, Austria, Switzerland, DACH countries

INTRODUCTION: THE DATAFICATION OF SOCIETY AND THE NEED FOR OPEN EDUCATIONAL RESOURCES

It has been 20 years since UNESCO first drew attention to the societal importance of online-based, freely available educational resources (Kerres, 2019). After 10 years, the ubiquitous nature of digital technologies (e.g., smartphones, tablets, and broadband internet access) have made it possible for digital, web-based learning and teaching platforms to establish themselves as a central pillar of education. Accordingly, UNESCO once more took action, and the “Paris OER Declaration 2012”

was put forward, highlighting the benefits of open education in an increasingly digital environment, as a tool to further the right to education for everyone (UNESCO, 2012). Open educational resources (OER) were defined in this document as “teaching, learning, and research materials in any medium, digital, or otherwise that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation, and redistribution by others with no or limited restrictions” (UNESCO, 2012). From a practical perspective, it also meant that OER became interlinked with the growing movement to support and use Creative Commons licenses in the digital space to allow collaborative work and the sharing of information and knowledge (Schön and Ebner, 2020, 7).

After the experience of the world financial crisis in 2009 and its consequences for higher education—sometimes forcing schools and individual learners to abandon for-profit learning materials—this can be seen as a timely move. The importance of OER has further increased in the years since then, especially after the COVID-19 pandemic struck. Most institutions belonging to the education sector were forced to switch their teaching modes toward online-based, distance teaching in early 2020. Those were relying, more often than not, on digital resources as well. While the majority of those resources are not broadly accessible because of copyright laws, ownership of material by publishers and the associated pay walls, the existing wealth of available—mostly English-language—OER offered a fast way to adapt teaching and learning to such new circumstances (Huang et al., 2020, 4).

This was especially important for the domain of research methods education in the social sciences. Several of its key components—the quantitative and qualitative studies of public opinions, values, and attitudes—and especially the domain of data interpretation received a huge boost in public attention as scientific data on the developments of the COVID-19 pandemic and related social issues became omnipresent in the mediascape and the public sphere as a whole (Dada et al., 2021). This situation was further complicated by the looming specter of an *infodemic* as it was feared that false or, at least incorrect, interpretation of data may become ubiquitous (Dada et al., 2021) because both social and traditional media around the globe reported record usage (Prandner, 2022, 91).

These developments were tied to a valid concern of researchers, who had noted long before the pandemic struck and the associated lockdowns started that there was an increasingly worrisome lack of methodological, especially quantitative, skills among the public, and also students, with consequences for academia and beyond (MacInnes, 2014, 1; Gunn, 2017, 4). Thus, easily findable, high-quality OER that can be thoroughly fact-checked or verified (Caulfield, 2017, 6) for topics concerning this field were in high demand by lecturers (e.g., Hasengruber et al., 2021, 285).

Unfortunately, despite its evident importance, the development of OER was not sufficiently embraced everywhere in the past. While national and even supranational plans were put forward in many regions of the world after the Paris OER Declaration to foster the development of such materials, the German-speaking region of Europe—also known as the D-A-CH region [Germany (D), Austria (A), and Switzerland

(CH)]—did not, at least at first, develop such strategies, and it let individual regions, institutions, and actors find their own pathways and create bottom-up efforts that might be picked up by governmental funding or not.

Due to this situation, it is important to take stock of the OER materials regarding social science research methods available during the pandemic years of 2020 and 2021 found in the D-A-CH space.

In this study, a focus is laid on the following questions:

- What kind of resources are available?
- What social science method-related topics they cover?
- What can be said about their quality?

Accordingly, the article gives, first, an overview (section “Reasons for Open Educational Resources and the State of the Open Educational Resources Landscape in the D-A-CH Region”) of the reasons for developing OER and the documented situation in the D-A-CH region, before we (section “Materials and Methods”) provide insights into our research design and (section “Results and Insights”) present and (section “Discussion”) discuss the results of our case study.

REASONS FOR OPEN EDUCATIONAL RESOURCES AND THE STATE OF THE OPEN EDUCATIONAL RESOURCES LANDSCAPE IN THE D-A-CH REGION

The following section illustrates the relevance of OER and discusses the situation in the German-speaking part of the world, which has been historically known to be critical of the OER movement (see Hylén et al., 2012), despite its stated importance.

Why Open Educational Resources Are Important and How Society Can Benefit From Them?

The 2012 Paris declaration by UNESCO generally highlights that OER are powerful tools promoting formal and non-formal education at all levels, contributing to social justice, the inclusion of marginalized groups, gender equity, and special needs education (UNESCO, 2012). This can lead to a democratization of knowledge (Lane, 2008), potentially reducing the financial costs traditionally associated with education, or an adaptation of resources to the needs and demands of a specific group of knowledge consumers, such as people with disabilities. In this way, OER increase the chance for open science as a whole.

Many see the origins of modern OER at the Massachusetts Institute of Technology, a prestigious higher education institution in the United States, that has typically high entry costs, has student fees, and is heavily reliant on copyrighted textbooks for lectures. Despite this, the Massachusetts Institute of Technology was one of the first institutions to create massive open online courses where all of their lectures are made available for anyone with internet access (Alquézar Sabadie et al., 2014, 3). With this, the importance of OER can be illustrated in two ways, addressing different needs

simultaneously. First, taking inequality into account, it can be stated that the importance of OER can be seen in the global south, where costs associated with traditional textbooks were often limiting or even undercutting the institutionalized and non-institutionalized study prospects of people (Hodgkinson-Williams and Arinto, 2017, 9). Second, in countries with strict copyright laws, such as most of the European Union members, genuinely open resources with corresponding licenses are very important to empower content creators, providing an alternative way to publish learning materials without having to rely on dominating publishing houses (Schön and Ebner, 2020, 7).

The further benefits of OER for both teaching and learning are manifold (Geser, 2007, 21; Ebner and Stöckler-Penz, 2011; Ebner et al., 2016, 35; Schön and Ebner, 2020, 15). Because of their availability, they can be used to expand the didactic opportunities and increase the flexibility of teaching and learning for all parties involved, for example, tutorial materials can be used by educators to supplement courses or even give students the chance to find materials on their level of knowledge without having to rely on predetermined course structures from higher education institutions (Ebner et al., 2016, 35; Schön and Ebner, 2020, 15). Due to the possibility of reuse, OER can save time and resources as educators can—depending on the licensing model used by the original creators—pick and choose to adopt their materials (Geser, 2007, 21; Ebner et al., 2016, 35). Accordingly, the construction and (re-)use of OER can facilitate collaboration and innovation between different institutions and actors, while also supporting user-centered learning experiences. Regarding the quality of the materials, one key area of debate which OER proponents have highlighted is that they are typically made by highly motivated academics, who aim to spread knowledge and interest in their field and, thus, provide high quality (Atenas and Havemann, 2013). Furthermore, they can be used on a societal level to promote lifelong learning and the knowledge society (Ebner and Stöckler-Penz, 2011).

Accordingly, OER can be seen as disruptive elements in the educational landscape. They challenge the professional educational sectors and traditional textbook publication and distribution. Their relevance and impact could already be seen during the economic and financial crisis of the late 2000s when access to commercial teaching and financing profit-orientated learning materials became difficult in some regions. On the one hand, people with no access to structural or formal education could bolster their knowledge. On the other hand, institutions that had only limited resources could offer their pupils and students materials to continue their education (Schön and Ebner, 2020, 7). A fact has continued to ring true since then, especially as some commercial publishers decided to increase their prices on e-books and online resources during the COVID-19 pandemic, provoking, for example, UK-based academics and students to organize the #ebooksos campaign, which, once again, highlighted the exclusionary character of commercial teaching materials (#ebooksos, 2022). As long as this is the case, there is a large potential for OER to contribute to social justice, retributive justice, and decreasing educational inequalities (Hodgkinson-Williams and Trotter, 2018; Lambert, 2018; Tang and Bao, 2020).

Furthermore, several authors have developed quality criteria for evaluating OER because online resources for education and training have become more common (Atenas and Havemann, 2013; Atenas et al., 2014; Luo et al., 2020). Zawacki-Richter and Mayrberger (2017), in their recent work, list three central criteria for evaluating OER that cover different pillars determining what a good resource has to encompass. Their framework addresses the (a) pedagogical quality of the material, the (b) technical aspect, and finally, (c) intellectual property-related criteria, regarding how open the material actually is. These are further broken down into many different measures, which can be further specified with the help of the quality framework by Atenas and Havemann (2013, 25–26). Using their definitions, a clear link between technical aspects and the usability is established, for example, structural clarity on how it is set up, the navigability of the material so that everyone can proceed and find the correct materials, and the possibility of retrieving topical content *via* key word search when using them digitally. Regarding pedagogical criteria, the quality and accuracy of information are of pivotal importance. While criteria such as academic peer review are less prevalent in the literature on OER assessment, they are, at least, implied by an opportunity to collaborate (Elias et al., 2020), which also has additional pedagogical benefits. Moreover, the possibility of identifying and interacting with the content's authors as well as a system for users to rate materials is relevant for ascertaining the quality of the information. Finally, their openness and transparency regarding sharing and reusing them are also very relevant.

Documented State of Open Educational Resources in the D-A-CH Region and Its Implications

It was illustrated in the last section that there are many reasons to argue for the advancement of OER. Many countries champion OER and are actively involved in fostering their systematic development. However, the German-speaking D-A-CH region can generally be classified as skeptics regarding the concept. The Organization for Economic Co-operation and Development, commonly known as OECD, reported in 2012 that only four of their member countries surveyed had no structuralized OER activity, with two of them being Germany and Switzerland (Hylén et al., 2012, 8–10). Even though Austria reported some activity at that point, this was mostly tied to its emphasis on the open-access publication of research results and articles (Hoosen, 2012, 8).

In a comparative study, Marín et al. (2020, 87–88) found very few OER initiatives on the national level in Germany. An initiative by the German Federal Ministry of Education and Research had little structural effect beyond raising awareness (Otto et al., 2021, 1063). This situation is somewhat tied to Germany's strongly federal system (Kerres, 2020, 690). While Marín et al. (2020, 87–88) could not find any national German OER repository, many federal states foster OER *via* regional networks. However, despite this somewhat positive assessment, the situation for higher education

remains dire overall. Only a few universities had a strategy for digitalization in place, and only one had an OER policy (Kerres, 2020, 690).

Reasons for the missing OER activity in Germany during the 2010s, despite being cutting-edge technology-wise in other respects (Marín et al., 2020, 85), were a series of concerns that severely doubted the practicality and usefulness of OER because questions regarding content quality, technical interoperability, and legal aspects—especially regarding copyright—were judged critically (Hylén et al., 2012, 8).

Overall, Kerres (2020, 691–692) concludes that there is a larger skepticism toward impacts of technology on daily life in Germany and a holistic idea of formal certified education (“*Bildung*”) that makes Germans particularly hesitant to adopt digitalization and OER.

It comes as no surprise that, despite being much smaller than Germany, the neighboring country of Austria is often contrasted favorably when it comes to the adoption of OER (Schön and Ebner, 2020, 15). Pioneering quasi-OER initiatives, such as Werner Stangl’s working sheets, go back to the 1990s (Schön and Ebner, 2020, 8). The University of Klagenfurt published course materials under Creative Commons licenses in the past (Ebner et al., 2016, 36). Furthermore, Graz Technical University was among the first institutions in Europe to put forward an institutional OER policy in 2010, and in 2014, it decided to establish the iMoox platform, offering massive open online courses under Creative Commons licenses in cooperation with the University of Graz (Ebner et al., 2016, 3; for other projects, see Schön and Ebner, 2020, 10–12).

In addition to those more local initiatives, the “Digital Roadmap,” a 2016 nationwide strategy article published by the Austrian Federal Ministry of Education (BKA and BMWF, 2016), mentioned OER, and the ministry subsequently carried out activities which supported already *gestaltend* projects (Schön and Ebner, 2020, 5). While for a long time, the ministry was mainly interested in jump-starting typical bottom-up initiatives for OER (Schön and Ebner, 2020, 13), it decided in 2019 to directly fund larger scale projects, such as “Open Education Austria Advanced” (2021–2024) carried out by Austrian universities.¹ However, this is a late move compared to many other countries, especially since it was only months before the COVID-19 pandemic started to upend traditional in-class lectures for most universities.

When it comes to Switzerland, it has to be reported that it had no countrywide OER programs in the past because regulators saw it as the duty of the individual cantons (i.e., provinces) to provide a framework (Hylén et al., 2012). This can be seen as a strategy mirroring the one found in Germany, putting the individual organizations and universities in charge of creating an environment for OER.

Those assessments toward OER can also be traced in the “Registry of Open Access Repositories.”² It does not currently list any open-access repositories focusing on teaching and learning in Austria and Switzerland and just one for Germany, which only

offers free publications in the educational sciences, despite the initiatives and programs mentioned before.

However, government-sponsored initiatives, such as the Open Education Austria Advanced mentioned before and the OER section at the homepage of the “Austrian Social Science Data Archive – AUSSDA,”³ hint at the development of a particular sector in Austria. The “Hamburg Open Online University,”⁴ for which an OER quality assurance framework was created (Marín et al., 2020, 88), and well-known platforms such as the *Methodenberatung* of the University of Zurich⁵ also show fruitful regional developments in Germany and Switzerland, respectively. We next assessed the situation of social science research methods’ OER in the D-A-CH region and attempted to find out if the critique issued by German representatives in the Organization for Economic Co-operation and Development 2012 survey on the state of OER was rectified and addressed, leading to OER in the field.

MATERIALS AND METHODS

The study takes stock of freely available online learning materials in the German language dealing with the field of social science research methods (following the quantitative and qualitative paradigms). While UNESCO definition includes the necessity to publish under Creative Commons licenses, it was decided to start with a classification of quasi-OER materials, such as those defined by Ochieng and Gyasi (2021, 9), that can be summarized as freely available teaching and learning materials found on the internet. This change of the working definition was necessary as it had to be anticipated that the OER materials in the German language—matching the UNESCO definition—would be too few for a structured analysis.

We decided to follow a three-pillared approach for the structured analysis. First, we opted to cover the web presence of the core associations representing social sciences in the German-speaking countries coming from sociology, psychology, communication and media studies, political science, and educational studies (e.g., DVPW, DGPuK, DGS, DGfE, ÖGS, SGS, ÖGK, SGKM, and ÖFEB). The second pillar consisted of homepages and initiatives coming from individual public universities and universities of applied sciences in the D-A-CH region, where we selected those who have chairs in empirical social research or departments focusing on such matters (e.g., departments that included descriptions such as ‘*empirische Sozialforschung*’ (empirical social research) or ‘*sozialwissenschaftliche Forschungsmethoden*’ (social science research methods). Normal web front-ends and e-learning platforms from both the association and the universities were considered for data collection.

Finally, the third pillar was tied to searching OER hubs and using a free web search *via* the search engine Google. Here, the logical operator (+) or the operator (“) for a specific

¹<https://www.openeducation.at/>

²<http://roar.eprints.org/>

³<https://www.aussda.at>

⁴<https://www.hoou.de>

⁵<https://www.methodenberatung.uzh.ch/de.html>

combination of words was used in conjunction with selected standardized key words for methods in the social sciences, for example, +*Sozialwissenschaft* (social science) +*Datenanalyse* (data analysis), ‘*sozialwissenschaftliche Methoden*’ (social science methods), and ‘*Methoden der Datenanalyse*’ (methods of data analysis). The same words were also used in conjunction with the term OER, but this restricted the number of search results greatly. Additionally, terms for common methods, such as grounded theory, regression, or factor analysis, were used in these combinations of terms. The first five pages of hits were considered for each combination. New combinations of the key words were tried until no new or useful hits could be generated. However, it has to be admitted that results may have been (willingly) influenced by the algorithms that started to track our search interests.

Based on this, a corpus of OER was generated for analysis. The following criteria had to be met to be part of this corpus: the materials had to be online-based (1) in the German language (2) and needed to cover quantitative or qualitative research methods from the social sciences (3). Furthermore, they needed to be at least partially openly available (4) and go beyond simple reference, reading lists, or syllabi (5). Following the arguments of Atenas and Havemann (2013, 27), we explicitly excluded course or seminar scripts, slides from specific courses, encyclopedia, glossaries, and repositories that contained scientific articles or qualification work (e.g., doctoral dissertations). There is an argument to be made that these materials which are often easily found *via* search engines can also greatly benefit students and other people willing to learn from high-quality and reliable sources. In that sense, the omission of these resources might limit the scope of the corpus and result in some undercoverage. However, it would be very hard to sample all the scripts, slides, and dissertations available, especially since the free availability of the first two is always transient. Additionally, web presence which consists solely of a YouTube channel was excluded due to their extremely varied quality and usefulness, even though some of them offer very useful information and insights into social science methods. Those limitations have to be kept in mind when reading both the results and discussion.

Data collection itself took place between May 19 and August 3, 2021—1 year after the COVID-19 pandemic had begun. All the materials that became part of the corpus were classified in part with reference to the criteria from Atenas and Havemann (2013, 25–26) mentioned before. We coded the materials regarding their mode (e.g., text and video) and what form of license was used. We just distinguished here whether copyright protection was likely or if it was published under a form of *Creative Commons* license. While we acknowledge that there are different, that is, more or less restrictive, *Creative Commons* licenses, such differentiations were omitted during quantitative coding as we anticipated little variance. Additionally, we ascertained whether there was chance for the users of the materials to provide feedback, collaborate, or interact (see **Table 1**).

In addition to these structural assessments, a number of content-based judgments regarding the quality of the free online learning resources were formulated by the research team.

Accordingly, we coded whether the resource treats data collection or data analysis. In the latter case, we determined whether the content was about quantitative and qualitative analyses and if it was on the beginner, intermediate, or expert level. While the beginner-level code included introductory aspects, levels of scales, and diverse statistical measures, and in the case of quantitative analysis (e.g., dispersion and centrality), the code for intermediate-level material was used if topics such as exploratory factor analysis, regression analysis, or grounded theory came up and were discussed, respectively. Objective hermeneutics, documentary analysis, metaphor, or discourse analysis in the qualitative case and structural equation modeling and confirmatory factor analysis in the quantitative case were considered as expert methods and coded accordingly. Additionally, we ascertained whether content in text or video formats was present and what form of content license was evident.

Further ratings concerned the overall structure of the web presence, especially regarding clarity and navigability, and whether the site offered a possibility to find specific topics *via* key word search; in short: can you find the content you search for? We judged the overall structure of the web presence *via* the category “good” if there were clear descriptors (e.g., “Intro to T-Test”), sensible and structured navigational elements (e.g., back and forward options and clear hierarchy), and no broken or wrong links. If only minor issues with navigation arose, we judged the quality with the medium category “okay.” If most of the elements were judged as problematic, we coded it with the category “bad.” Finally, regarding quality and collaboration, it was ascertained whether the resources had identifiable authors attached to them, and if it was freely possible to make comments or rate the content.

RESULTS AND INSIGHTS

First and foremost, even the world database of open-access educational resources does not identify a large number with OER content for social science research methods in the D-A-CH region. In January 2022, only one OER activity could be found that matches the criteria in the Registry of Open Access Repositories. While other aggregation platforms, such as Edukatico⁶ or the OER-Content Buffet,⁷ offered at least some more basic content or links to such content, most of the material was either in a language other than German or did not match the established criteria in one way or another.

This limited OER activity is also mirrored by the activities of the subject-based associations: not one OER—or other forms of free online learning materials—could be found in their online presences, even if dedicated research method sections existed that were hosting workshops or conferences, such as the methods section of the Austrian Sociological Association, which is hosting workshops on advanced methods according to their homepage.⁸

⁶<https://www.edukatico.org/de>

⁷<https://oer-contentbuffet.info/edu-sharing/components/oer>

⁸<http://oegs.ac.at/soziologische-methoden-und-forschungsdesigns/>

TABLE 1 | Categories for the evaluation of open educational resources (OER).

Codes	Topic	Level	Modality	License	Navigation overall	K.W. search	Identifiable author	Comments	Rating
Values	Methods of data collection	Beginner	Text	Copyright protected	Good	Offered	Yes	Possible	Possible
	Methods of quantitative data analysis	Inter-mediary	Audiovisual	<i>Creative Commons</i>	Ok	Not offered	No	Not possible	Not possible
	Methods of qualitative data analysis	Expert	–	–	Bad	–	–	–	–

However, our own research showed that there was, at least, some relevant activity in the field, which was mostly tied to individual universities. Overall, 19 platforms could be identified, 13 of them text- and six of them video-based. The latter was mostly portals with recordings of lectures. This means that the majority of quasi-OER materials identified are text-based content, and only a limited number of them are presented in an audiovisual format.

While these platforms are often hard to discover on their university homepage because of complex navigation structures and problematic URL denominations, they can be generally seen as high-quality materials. Once people engages with the OER portals themselves, they are often highly structured, can be easily navigated, and often allow key word searches to find information quickly about specific topics or methods. One major example is the web presence of the method center of the Ruhr University Bochum (*RUB Methodenzentrum*),⁹ which covers numerous facets of many qualitative and quantitative methods. The information is presented in small, easy-to-grasp snippets, yet the clearly displayed navigational structure makes it easy to navigate. The resources are in text form with accompanying diagrams, and specific methods can be either searched *via* key words or chosen from a world cloud. Other German universities publish open method content in the learning management ILIAS (*Lern-, Informations- und Arbeitskooperations-System*) and in the form of specific lectures. While only a minority of the content is openly available for non-students of the respective university, there are also examples of collaboration in the spirit of open education. The social science methods section of the Justus Liebig University Gießen¹⁰ also contains an adapted educational resource originally created by lecturers from Martin Luther University in Halle.¹¹

Finding information about specific content is much harder on video platforms, which are often only structured according to university departments and lecture series and frequently do not allow any quick searches for specific methods. While the resources in Germany are spread out over several universities, the main contributions to be found in Austria and Switzerland are at the most prestigious universities of the respective countries—for example, the universities of Vienna and Zurich.

Regarding the openness of the resources by universities, only five of 13 text-based platforms provided information on a Creative Commons license, while the rest either used closed licenses or protected their material with strict copyright. Concerning the videos, only one—the platform of the University of Darmstadt—provided materials that had an actual Creative Commons license. Most of the university-based pages provided little information on the authors or creators of the resources. Overall, the OER criteria-based quality assessment highlights that only a limited number of materials can be seen as actual OER, with both restrictions and limited usability.

Regarding the type of content the learning materials provided by the universities cover, they include a broad range of quantitative and qualitative methods. However, most of them only deal with beginner- and mid-level materials. Expert-level quantitative methods, such as structural equation modeling or confirmatory factor analysis, were not covered by any of the text platforms. Nevertheless, two expert-level resources were available on the video-based platforms. Furthermore, four of the text-based platforms covered expert-level information on qualitative methods, such as documentary analysis. An additional platform provided audiovisual content on these topics (see **Figure 1** for an overview of the topics covered). Only one of the platforms identified allowed for a rating of the materials provided, and none allowed direct interaction. The last point especially is a big disadvantage when it comes to the teaching of methods because users cannot easily discuss their issues regarding practical problems and projects. To do so would help them embed the theoretical methods information in other problems of their academic, professional, or private life and, thereby, foster interest and learning (MacInnes, 2014, 4; Gunn, 2017, 6).

However, the material provided by universities seems to address one core aspect: it provides a wide spread of content in a way that offers students and interested people a chance to acquaint themselves with the topic of social science research methods, even if they have no or only limited prior knowledge.

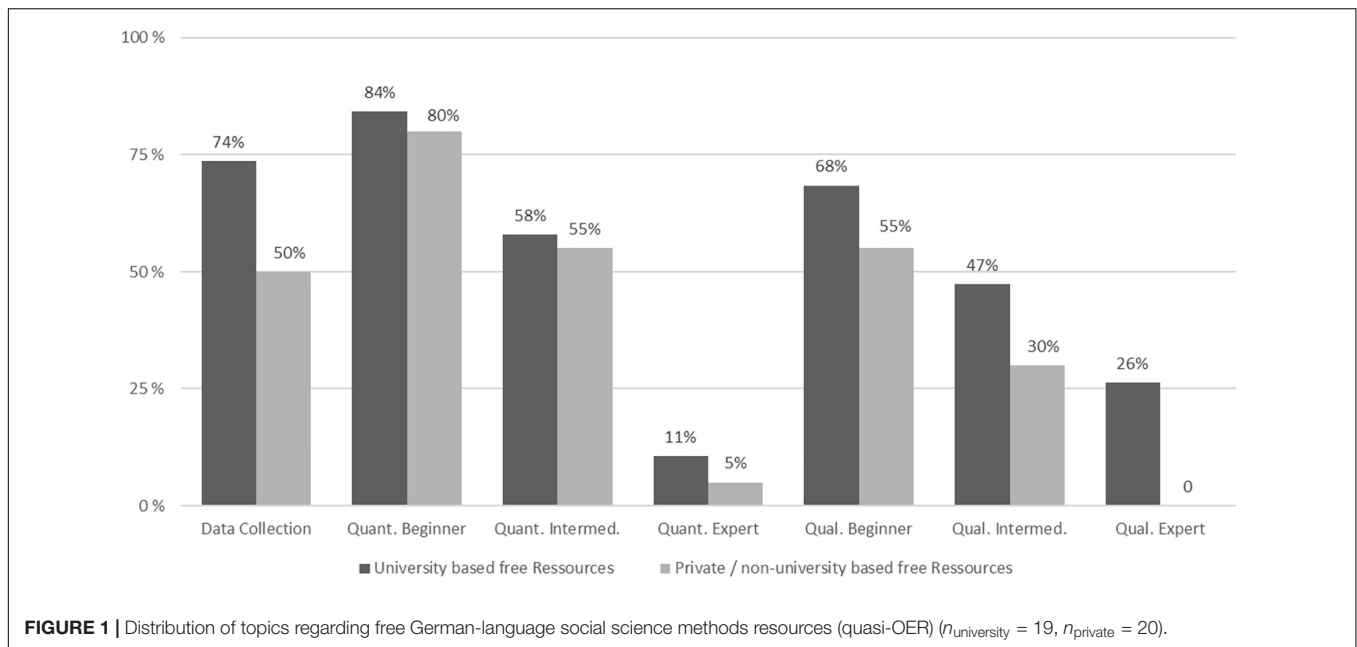
Moving away from official platforms offered by universities and taking a look at content hosted by individuals and private organizations, we can see that there is a highly heterogeneous field of resources to be found. First, a number of commercial software providers, such as the start-up Datatab¹² (quantitative data analysis tool) and prominent text analysis software provider

⁹<https://methodenzentrum.ruhr-uni-bochum.de/>

¹⁰<https://ilias.uni-giessen.de/ilias>

¹¹<https://ilias.uni-halle.de>

¹²<https://datatab.de/>



MAXqda¹³ (qualitative data analysis tool) offer free materials to support their core business. Springer-owned *Iiversity*¹⁴ offers some courses for free as well. Several providers of quantitative data analysis, such as Statistik und Beratung¹⁵ or Novustat,¹⁶ also provide free tutorials and learning resources on a blog section and/or in the form of embedded YouTube videos. They are quickly discoverable *via* Google searches, in order to draw people interested in the topic to their homepages as potential customers. However, on the homepage itself, those resources are often buried in chronologically ordered blog sections, while the focus of the page clearly belongs to the commercial services. The same is true for providers of diverse services for students, for example, printing of academic theses or tutorial assistance, or even forms of ghost writing. Many of these platforms enable users to comment, leave feedback, ask questions, and interact with the content creators or other users. In many cases, users ask about problems that occurred in their specific practical projects, thereby combining theoretical learning with practice orientation. This form of collaboration is only possible with some of the private providers in the accompanying YouTube channel. Unlike the academic portals, here, the creators of specific resources are, in most cases, easily identifiable and have left an e-mail address for contacts, which makes them at least somewhat answerable for the accuracy of their information. However, only a few of these private providers have implemented a system to rate the materials directly.

Those resources are problematic from an OER standpoint as they serve a commercial interest (e.g., promoting their tool or service) and are often copyright-protected. Furthermore, web

presence that is not tied to such more or less commercial enterprises is often presented in blog formats or on sub-pages of other open science initiatives, such as the Austrian Social Science Data Archive (AUSSDA), and are, thus, hard to find or organized in an unsystematic way. Yet, interesting projects exist, such as Memucho,¹⁷ a Wiki under Creative Commons licensing in the beta phase, which does not provide traditional information about subjects directly but questions and answers to assist the learning process.

The resources provided by private actors topic-wise are not too different from the material found at university sites, mainly focusing on beginner-level material (see **Figure 1**). There were also more resources for quantitative than qualitative methods. This might reflect either a higher perceived relevance or a better suitability for distance teaching. The difference between those two kinds of resources lies in the balance. While more than half of the 19 university-based resources provide information on quantitative and qualitative methods, only seven of the 20 private web presences do so, and a half of the latter is dedicated only to quantitative methods.

If stand-alone YouTube channels are included, then more content about expert methods are available; however, these channels are often operated by unknown private people, lectures are sometimes of various sizes and quality, and the reliability of the information is hard to assess. True OER are still the exception, rather than the rule.

DISCUSSION

Despite the increasing importance of OER and the general interest in the topic, the number of freely available learning

¹³<https://www.maxqda.de/>

¹⁴<https://iversity.org/de>

¹⁵<https://statistik-und-beratung.de/>

¹⁶<https://novustat.com/>

¹⁷<https://memucho.de/Globales-Wiki/1>

materials in the D-A-CH region covering social science research methods is still limited.

Taking a look back at the questions raised at the beginning of this article, we see that text and audiovisual materials are available, with universities focusing on text content and private—often commercial—actors offering audiovisual content for free. However, “for free” does not mean OER as only a few of them are actually licensed under a Creative Commons license, and their potential (re-)use is thus a legal gray area. Furthermore, quality criteria, such as navigation, searchability, chances for collaboration, and enhancement, were only fulfilled by the minority of materials identified.

Taking a look at the content that is covered, the picture becomes a bit brighter, even if it is not perfect (see also **Table 2**). Despite the limited number of OER or quasi-OER identified, they cover a wide range of topics and methods, mostly focusing on beginner and intermediate skill levels. Even a few expert-level materials are available, such as structuring equation modeling. Those few contributions, nevertheless, cannot cover the width of methods and tools that exist. Furthermore, all of those materials are tied to either universities or corporations with a strict interest to provide incentives and tutorials for their (potential) costumers. This matches the results of previous—pre-pandemic—analyses of the region (e.g., Hühne, 2018, 150, 155). People interested in these topics find additional resources on YouTube.

Reflecting on the situation in more detail, the relevant academic associations and their method sections, which are in a position to act as hubs for the distribution of free high-quality educational resources, do not even provide links to appropriate OER or repositories. The material identified coming from universities provides high-quality information, which is sometimes limited in scope. However, this material is often hard to find on their university portals without prior knowledge of its existence. It is also interesting that even if past literature viewed the situation of OER in Austria more favorably than Germany, almost all the universities with portals for social science methods are from Germany and only one is from Austria. The situation in Switzerland—apart from specific lighthouse examples—seems equally dire.

Accordingly, the larger implications of the hard-to-find and navigate content on university platforms must be considered. Universities offer high-quality material on a beginner level in the German language. These materials could ease people

from different areas of life into the domain of social science research, with the built-in benefit of credibility bestowed upon academic institutions by the public. If findability, access, and navigation were improved, the OER and quasi-OER materials provided by universities could provide benefits for groups not directly associated with research and academia, like non-profit organizations or non-governmental organizations, that may need to educate their members or volunteers in certain issues, but lack funds to hire trainers or acquire the necessary commercial resources—for example, textbooks—to do so.

Additionally, a lot of the resources for social science methods that are easily findable *via* Google searches were created and published by private people or enterprises. While the non-Creative Commons licenses and potential ties to commercial actors of these resources may not be a hindrance for the content-based quality, they, at least, limit the use of such materials and their application in educational scenarios—be they institutionalized or driven by personal interest in the topic (Kerres, 2019, 6). Accordingly, it shows that the lack of a national or even supranational strategy regarding the development of OER may have resulted in the situation where, even in times of crisis when, for example, the information on how to read and understand statistical data presented in the media would be very important, free and openly accessible learning materials are not readily available. Those that are available are often hard to find for people that do not already know of the existence of the resources, such as from the instructor of the local university. While it is possible that students and people otherwise interested in social scientific methods from the D-A-CH region who are proficient in English language may find a number of high-quality OER available to them, individuals who are solely relying on German material only have a very basic opportunity to further their knowledge. In a worst-case scenario, this can even result in a further increase in the already long building knowledge gap (Tichenor et al., 1970) and the potential of OER posited by UNESCO to foster inclusivity and decrease educational inequality, which would be highly important in times of crisis, is not used.

Overall, it is an alarming result that 10 years after the Paris OER Declaration, a region that is committed to open science and a key partner in establishing the European Open Science Cloud (Burgelman, 2021) seems to be lacking in highly societally relevant open educational resources that are

TABLE 2 | Research questions and summarized answers.

What kind of resources are available?	Firstly, there are university-based methods portals with quality resources by academics. These portals sometimes publish under Creative Commons licenses as well as video portals often containing recording of lectures about methods. Secondly, there are text- and video-based resources by private actors, many of whom provide these freely accessible but copyrighted content out of commercial interest
What social science methods related topics do they cover?	Most of the resources about social science methods treat beginner level topics and there is a dearth of (quasi-)OER treating expert level methods. Finally, there are more resources regarding qualitative rather than quantitative methods of data analysis
What can be said about their quality?	Most portals or web presences with social science methods OER or quasi-OER are either clearly structured and/or allow searches for specific methods via key words. The big advantage of the university platforms is that their resources are mostly made by academics, which somewhat speaks for their accuracy. About half of them are also published under a Creative Commons license, which means that they are freely reusable. However, they mostly do not, unlike most of the resources by private actors, allow interaction and collaboration with the material's producers or with other users. The resources by private actors, however, are mostly copyrighted and, therefore, not OER in the strict sense

central for navigating the increasingly digitized and datafied society. Additionally, already available free social science methods context created by universities is not promoted sufficiently enough.

This assessment has to be seen as highly problematic. Not only has there been only limited movement in the development for OER—at least when it comes to social science research methods—since Hoosen (2012) pointed out the lack of engagement in the German-speaking part of the world but the COVID-19 pandemic has also shown that knowledge in this field of social science research methods is important for processing developments in everyday life—understanding statistics and shifts in attitude—and thus highlighted a need for OER dealing with social science research methods. Even before this situation took root, researchers had already concluded that there is an increasingly worrisome lack of comprehension of social scientific inquiry (MacInnes, 2014, 1; Gunn, 2017, 4).

As this endeavor was limited to a mapping study and an analysis based on the mapping, it is necessary that follow-up research engages with OER and quasi-OER creators in the field of social science research methods and finds out about their assumptions and goals, why they produce German language content, and if they are satisfied with the conditions for OER creators in the D-A-CH space. Thus, barriers for the creation of high-quality OER on the level of creators could be identified. Another possibly fruitful line of inquiry could focus on the perspective of students or other users and potential users of OER dedicated to social science methods: Which resources do they know and use, and which not and why? How much did their learning processes benefit from them and what features do they currently miss?

REFERENCES

- #Ebooksos (2022). *Campaign to Investigate the Academic Ebook Market*. Available online at: <https://academicebookinvestigation.org/> (accessed June 8, 2022).
- Alqu zar Sabadie, J. M., Casta o Mu oz, J., Puni, Y., Redecker, C., and Vuorikari, R. (2014). OER: a European policy perspective. *J. Interact. Media Educ.* 5, 1–12. doi: 10.5334/2014-05
- Atenas, J., and Havemann, L. (2013). Quality assurance in the open: an evaluation of OER repositories. *Innoqual* 2, 22–34. doi: 10.3402/rlt.v22.20889
- Atenas, J., Havemann, L., and Priego, E. (2014). Opening teaching landscapes: the importance of quality assurance in the delivery of open educational resources. *Open Praxis* 6, 29–43. doi: 10.5944/openpraxis.6.1.81
- BKA and BMWFV (2016). *Digital Roadmap Austria. Die Digitale Strategie der  sterreichischen Bundesregierung*. Available online at: <https://www.digitalroadmap.gv.at> (accessed March 1, 2022).
- Burgelman, J. C. (2021). Politics and Open Science: How the European open science cloud became reality (the untold story). *Data Intell.* 3, 5–19. doi: 10.1162/dint_a_00069
- Caulfield, M. (2017). *Web Literacy for Student Fact-Checkers*. Available online at: <https://openlibrary-repo.ecampusontario.ca/jspui/handle/123456789/358> (accessed June 8, 2022).
- Dada, S., Battles, H., Pilbeam, C., Singh, B., Solomon, T., and Gobat, N. (2021). Learning from the past and present: social science implications for COVID-19 immunity-based documentation. *Humanit. Soc. Sci. Commun.* 8:219. doi: 10.1057/s41599-021-00898-4
- Ebner, M., Kopp, M., Freisleben-Deutscher, C., Gr binger, O., Rieck, K., Sch n, S., et al. (2016). “Recommendations for OER integration in Austrian higher

education,” in *Proceedings of the Online Open and Flexible Higher Education Conference, EADTU, Rome*, 34–44.

Finally, it could be shown that the number of social science research methods OER in the German language is lacking; therefore, further inquiry is necessary to ascertain whether this lack of materials has led to an adoption of English-language OER materials in courses and research or if they are still mostly omitted? Universities in the D-A-CH region are becoming more open to offering study programs in English and encouraging researchers to publish in English language outlets; thus, such an inquiry may provide further insights into how and where OER are adopted in the region that is traditionally skeptic toward the concept.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

AUTHOR CONTRIBUTIONS

DP: providing the research design for the mapping study and assisting MF during the actual mapping, conducting a literature review dealing with the current state of research on OER and OER policy in the D-A-CH-region, writing a first version of the presented article, and revising the article after the peer review. MF: collecting the dataset for the article (i.o.W.: searching for OER, creating a corpus and evaluating it), presenting interesting results to DP and preparing them for inclusion in the article, and contributing to the first draft of the article. Both authors contributed to the article and approved the submitted version.

- education,” in *Proceedings of the Online Open and Flexible Higher Education Conference, EADTU, Rome*, 34–44.
- Ebner, M., and St ckler-Penz, C. (2011). “Open Educational Resources als Lifelong-Learning Strategie am Beispiel der TU Graz,” in *The Lifelong Learning University*, eds N. Tomascheck and E. Gornik (Oldenburg: Waxmann), 53–60.
- Elias, M., Oelen, A., Tavakoli, M., Kismihok, G., and Auer, S. (2020). “Quality evaluation of open educational resources,” in *European Conference on Technology Enhanced Learning*, eds C. Alario-Hoyos, M. J. Rodr guez-Triana, M. Scheffel, I. Arnedillo-S nchez, S. M. Dennerlein, and T. F. Frey (Cham: Springer), 410–415. doi: 10.1007/978-3-030-57717-9_36
- Geser, G. (2007). *Open Educational Practices and Resources – OLCOS Roadmap 2012, Salzburg 2007*. Available online at: <http://www.olcos.org/english/roadmap/2013-11-12> (accessed March 1, 2022).
- Gunn, A. (2017). Critical debates in teaching research methods in the social sciences. *Teach. Public Adm.* 35, 241–259. doi: 10.1177/0144739417708837
- Hasengruber, K., Forstner, M., and Prandner, D. (2021). “Adapting your teaching during the pandemic? How social science research education adapted to the COVID-19 pandemic,” in *Proceedings of the 7th International Conference on Higher Education Advances*, eds J. Domenech, E. Poza, P. Merello, G. Bramley, and D. Zehetmeier (Valencia: Universitat Polit cnica de Valencia), 413–420. doi: 10.4995/HEAD21.2021.13059
- Hodgkinson-Williams, C., and Arinto, P. B. (2017). *Adoption and impact of OER in the Global South*. Cape Town: African Minds, International Development Research Centre. doi: 10.5281/zenodo.1005330
- Hodgkinson-Williams, C. A., and Trotter, H. (2018). A social justice framework for understanding open educational resources and practices in the global south. *J. Learn. Dev.* 5, 204–224.

- Höhne, T. (2018). "Ökonomisierung der Produktion von Schulbüchern, Bildungsmedien und Vermittlungswissen," in *Sozioökonomische Bildung und Wissenschaft*, eds T. Engartner, C. Fridrich, S. Graupe, R. Hedtke, and G. Tafner (Wiesbaden: Springer), 141–162.
- Hoosen, S. (2012). *Survey on Governments' Open Educational Resources (OER) Policies*. Vancouver: Commonwealth of Learning.
- Huang, R., Liu, D., Tlili, A., Knyazeva, S., Chang, T. W., Zhang, X., et al. (2020). *Guidance on Open Educational Practices during School Closures: Utilizing OER under COVID-19 Pandemic in line with UNESCO OER Recommendation*. Beijing: Smart Learning Institute of Beijing Normal University.
- Hylén, J., Van Damme, D., Mulder, F., and D'Antoni, S. (2012). *Open Educational Resources: Analysis of Responses to the OECD Country Questionnaire*. Paris: OECD Publishing.
- Kerres, M. (2019). Offene Bildungsressourcen und Open Education: openness als Bewegung oder als Gefüge von Initiativen? *MedienPädag. Z. Theor. Prax. Medienbildung* 34, 1–18. doi: 10.21240/mpaed/34/2019.02.17.X
- Kerres, M. (2020). Against all odds: education in Germany coping with Covid-19. *Postdigit. Sci. Educ.* 2, 690–694. doi: 10.3390/ijerph18020507
- Lambert, S. R. (2018). Changing our (dis) course: a distinctive social justice aligned definition of open education. *J. Learn. Dev.* 5, 225–544.
- Lane, A. (2008). "Widening participation in education through Open Educational Resources," in *Opening up Education: The Collective Advancement of Education through Open Technology, Open Content and Open Knowledge*, eds V. T. Iiyhoshi and M. Vijay Kumar (Cambridge, MA: The MIT Press), 149–164.
- Luo, T., Hostetler, K., Freeman, C., and Stefaniak, J. (2020). The power of open: benefits, barriers, and strategies for integration of open educational resources. *Open Learn.* 35, 140–158. doi: 10.1080/02680513.2019.1677222
- MacInnes, J. (2014). Teaching quantitative methods, enhancing learning in the social sciences. *Enhanc. Learn. Soc. Sci.* 6, 1–5. doi: 10.11120/elsc.2014.00038
- Marin, V. I., Zawacki-Richter, O., and Bedenlier, S. (2020). "Open educational resources in German higher education – an international perspective," in *Proceedings of the EDEN Conference*, Lisbon, 85–94. doi: 10.38069/edenconf-2020-rw-0010
- Ochieng, V. O., and Gyasi, R. M. (2021). Open educational resources and social justice: potentials and implications for research productivity in higher educational institutions. *ELearn. Digit. Media* 18, 105–124. doi: 10.1177/2042753021989467
- Otto, D., Schröder, N., Diekmann, D., and Sander, P. (2021). Offen gemacht: Der Stand der internationalen evidenzbasierten Forschung zu Open Educational Resources (OER). *Z. Erziehungswiss.* 24, 1061–1085. doi: 10.1007/s11618-021-01043-2
- Prandner, D. (2022). "Informationsverhalten und Glaubwürdigkeit von Medien in der Krise," in *Die österreichische Gesellschaft während der Corona Pandemie*, eds W. Aschauer, C. Glatz, and D. Prandner (Wiesbaden: Springer VS), 89–119. doi: 10.1007/978-3-658-34491-7_4
- Schön, S., and Ebner, M. (2020). "Open educational resources in Austria," in *Current State of Open Educational Resources in the 'Belt and Road' Countries, Lecture Notes in Educational Technology*, eds R. Huang, D. Liu, A. Tlili, Y. Gao, and R. Koper (Singapore: Springer), 17–33. doi: 10.1007/978-981-15-3040-1_2
- Tang, H., and Bao, Y. (2020). Social justice and K-12 teachers' effective use of OER: a cross-cultural comparison by nations. *J. Interact. Media Educ.* 2020:9. doi: 10.5334/jime.576
- Tichenor, P. J., Donohue, G. A., and Olien, C. N. (1970). Mass media and differential growth in knowledge. *Public Opin. Q.* 34, 159–170. doi: 10.1086/267786
- UNESCO (2012). *Paris OER Declaration. World Open Educational Resources (OER) Congress June 20-22*. Paris: UNESCO.
- Zawacki-Richter, O., and Mayrberger, K. (2017). *Qualität von OER: Internationale Bestandsaufnahme von Instrumenten zur Qualitätssicherung von Open Educational Resources (OER) – Schritte zu einem deutschen Modell am Beispiel der Hamburg Open Online University. Sonderband zum Fachmagazin Synergie*. Hamburg: Universität Hamburg. doi: 10.25592/978.3.924330.61.3

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