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Abstract

The Open Science Fellow Program offered a community where researchers learned to work openly. Within this environment, questions came up on how to teach openly, i.e. which practices stand for open learning and teaching and which proven examples can be shared amongst colleagues and peers? Different concepts of open educational practices aim at giving answers to open learning and teaching. However, open educational practices still lack a common definition and many discussions on the topic only give minimal or implicit guidance to concrete approaches of being open - despite the creation and sharing of open educational resources.

Investigating how we, practitioners, implement concepts of open educational practices in the classroom was the activator for the autoethnographic study we describe in this paper. Starting from a literature search to seek evidence of explicit concepts of OEP, we reflected those concepts with regard to their adaptation in our own teaching and our experiences with OER-based and other teaching concepts. The paper discusses four investigated research papers that each were reflected by the four authors - practitioners in higher education in Germany. It summarizes the main findings to draw conclusion on the current state of ideas of open educational practices and their practical adaptation and implementation in learning and teaching scenarios.

Keywords

open educational practices, open educational resources, autoethnography

Introduction

One goal of the Open Science Fellow Program*[1] was to qualify researchers to work openly. It supported knowledge spaces where participants learned about open science practices and where they shared proven concepts from their experiences. Here, questions among participants - fellow and mentors likewise - came up on how to open up one's learning and teaching. Primarily, fellow projects investigated open educational resources (OER), e.g. prepare and share material as OER, e.g. content on social entrepreneurship*[2] and a book of statistical proofs*[3]. Those projects are in line with the increasing importance of openness in research and education in the "collaborative, interactive culture of the Internet" (Cape Town Open Education Declaration 2008). Digital resources can be easily shared, which became even more relevant due to the COVID-19 pandemic (Van Allen and Katz 2020).

Other fellow projects expanded their goals and did not only focus on sharing reusable material, but aimed at involving a community - like research peers and students - to create high quality resources and let different groups participate in the process. Two example are OpenRewi*[4] and the teaching project*[5] of this paper's author Naomi Truan. In relation to those and related projects questions came up on how to teach openly, i.e. which practices do we mean when we speak of teaching openly, and are there any proven concepts we can hold on?

For research, concepts of open science practices evolved with the goal to make all research processes transparent and accessible (Bartling and Friesike 2014). FOSTER*[6] gives an overview of elements and topics related to open science. Discussions on open education often capture a broader perspective referring to education as a human right, the access of the educational system and education as a public good (Blessinger and Bliss 2018, Kerres 2019, UNESCO/UNICEF 2008). In relation to these discussions, openness in concrete teaching and learning situations investigate the operationalization and impact of two interrelated concepts, i.e. open educational resources and open educational practices.

Open Educational Resources (OER) are openly licensed educational material. In its broadest definition it includes any kind of material in any medium that can be used for teaching and learning, ranging from individual worksheets over books to complete online courses (UNESCO n/A). Open educational practices (OEP) can be seen as an expanded idea of OER, where the focus is not on the availability of learning and teaching material only, but on open practices within learning and teaching contexts.

The intentions of OER were manifold, reaching from being a driver "to make education both more accessible and more effective" (Cape Town Open Education Declaration 2008), improving the quality of learning and teaching (Farrow et al. 2020, Orr et al. 2015) or fostering collaboration and economic development (Johnstone 2005). In retrospect, those altruistic debates on the use and creation of OER and their contribution to opening up education preceded rather disillusioning results on the uptake of OER amongst educators. Framing the idea of OER in a set of open practices like OEP, evoke further obstacles, even

more when this newer concept lacks a common understanding. Whereas definitions of OER are similar in core aspects —differences appear e.g. with regard to concrete licensing (Kerres and Heinen 2015) and if OER include explicit learning and teaching material or all openly licensed material —OEP still lacks a common definition (Bellinger and Mayrberger 2019, Mayrberger 2020). The term itself seems to suggest concrete practices. Developing from the OER movement, the most explicit practices in many OEP concepts are using and creating OER. But what other practices do existing OEP concepts include? For an educator interested in opening up his or her teaching, this question is not only a matter of descriptions of open practices, but to a concrete implementation and adoption of them in his or her teaching contexts. In other words: How do OEP concepts translate into practice?

Investigating how we, practitioners, implement OEP concepts in the classroom was the activator for the autoethnographic study we describe in this paper. Starting from a literature search to seek evidence of explicit concepts of OEP, we reflected those concepts with regard to their adaptation in our own teaching and our experiences with OER-based and other teaching concepts.

In section 2, we will give a brief history of the main debates and studies on OER and OEP, before we introduce our methodology in section 3, and present and discuss our results in section 4. Section 5 concludes with our findings.*[8]

Development of Ideas on OER and OEP

Within the paradigm of openness in education, OER and OEP developed in two phases (Ehlers 2011). The first phase was mostly concerned with OER, a term established by the UNESCO (2002). The *Paris OER Declaration* (UNESCO 2012) defines OER 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". Bliss and Smith (2017) summarize it as the two major components of OER: "it is available for free to all and it is adaptable to serve the needs of the user". Going further, OER are guided by five principles, the '5 Rs of openness' (Wiley n/A): One can *retain* and *reuse* them (e.g., in a seminar or on a website), *revise* them (i.e., adapt or alter the content), *remix* them (i.e., combine them with other OER) and *redistribute* them (e.g. upload them in open repositories). The responsible use of OER is warranted by a system of licensing, for example by the Creative Commons licensing framework*[7].

The potentials of OER lie in their free accessibility. The UNESCO stresses their potential specifically for disadvantaged regions (Johnstone 2005), but open textbook initiatives e.g. in the UK try to reduce students' costs for expensive study resources as well (Farrow et al. 2020). Beyond accessibility, the 5 Rs aim for more collaboration and communication, not only amongst educator, who might create common OER and share capacities, but also among educators and students. DeRosa and Robison argue that the openness of the resources enables a "shift" in how students conceptualize learning, as the engagement

moves from one between the student and the content to an interaction between students and students and instructor. The creation and reuse of OER thus goes beyond the mere production of resources insofar as "students asked to interact with OER become part of a *wider public* of developers, much like an open-source community" (DeRosa and Robison 2017; also see Truan and Dressel (2021)).

Despite their potential, OER are not widely used in education. Studies from the U.S. show that "the levels of awareness of OER, the licensing tied to it, and overall adoption of OER materials, remains low" (Seaman and Seaman 2017: less than a third of faculty members (30%) are either "very aware" (10%) or "aware" of OER. Other studies come to similar results (Boston Consulting Group 2013, Heck et al. 2020a) and show that reasons for a low OER uptake lie in not finding high quality OER or specific content for one's context or discipline, not having the time to create and share OER, and not seeing any benefits in using or creating OER in one's specific teaching context.

The second phase sees a shift from OER to OEP (DeRosa and Robison 2017, Ehlers 2011 , Karunanayaka et al. 2015, Ossiannilsson et al. 2020) around the promise that OEP will "unleash the power" of OER (Ehlers and Conole 2010). While the idea that "[o]nly the use of OEP leads to open education" (Mayrberger 2020, p. 1) is now widely shared in the scientific community, there is no consensus on how OEP are defined, nor on how to describe their relation with OER. While OER have been closely scrutinized, OEP are still underinvestigated (Wiley and Hilton III 2018, p. 21), which can be explained by the fact that OER are *resources* that can be grasped (Bellinger and Mayrberger 2019, p. 23): you can create them, reuse them, criticize them. In other words, OER are visible in concrete results. OEP, on the other hand, are *practices*, i.e. they include processes that may lead to OER, and for this reason seem harder to define and describe.

OEP have been defined in several slightly different ways. In their exploratory literature review on OEP, note that the first reference to digital OEP was published in 2007 (Cronin and MacLaren 2018, Koseoglu and Bozkurt 2018) , and followed by "a slow but steady increase". Besides the term OEP, other terms that discuss similar concepts are open pedagogy (Hegarty 2015, DeRosa and Jhangiani 2017), *open digital practices* (Gallagher and Lamb 2016)and *OER-enabled pedagogy* (Wiley and Hilton III 2018). Most literature uses those terms as quasi-synonyms, and in the following we will write OEP, but as well refer to literature that uses those other terms.

First understood as "a set of activities and support around the creation, use and repurposing of OER" (Conole 2010), OEP must be assessed according to two important dimensions: (1) "the stakeholders engaged with creating, using or supporting the use of OER"; (2) "the range of mediating artefacts that can be used to create and support the use of OER", including "tools and resources", "technologies", and "contextual factors which impact on the creation, use or support of OER" (Ehlers and Conole 2010, p. 2). A more expanded definition sees OEP as a way to "us[e] OER in a way that learning experiences improve and educational scenarios are innovated" (Ehlers 2011, p. 2). This is usually

meant to encompass "collaborative practices that include the creation, use, and reuse of Open Educational Resources, as well as pedagogical practices employing participatory technologies and social networks for interaction, peer-learning, knowledge creation, and empowerment of learners" (Cronin 2017, p. 4).

To be truly considered as open, OEP rely on interrelated principles, sometimes also listed as attributes or features of openness. Among them are collaboration and sharing of information, connected communication about learning and teaching, collectivity to grow knowledge and resources, critique for the promotion of scholarship, serendipitous innovation (Conole 2013) . Hegarty (2015) expanded those perspectives under eight concrete attributes. She describes each attribute thoroughly. OER in this context are applied within the "new culture of learning". The eight attributes are seen as a metalevel of open pedagogy, where in such an environment, concrete practices can be implemented and promoted. As earlier papers did, Hegarty (2015) gives us a conceptual framework to make OEP more tangible, i.e. to let educators become a better picture of open practices. In her interview study with practitioners in higher education, Cronin (2017) unfolds the motivations behind using OEP based on interviews with educators. The study gives insights into how OEP can translate into daily teaching practices and which factors foster or hinder this.

Other studies investigate learners' perceptions in concrete teaching scenarios, like examples of co-creation of learning scenarios with students and staff (Bovill et al. 2016) , and qualitative analysis of students' positioning towards open science (Truan and Dressel 2021) . Investigating benefits and obstacles of OEP in concrete scenarios is also a claim of Wiley and Hilton III (2018) , who see a need for more evidence-based decisions to uptake OER and OEP. In their paper on OER-enabled pedagogy, they do not investigate any study, but try to explicitly describe how OEP scenarios can look like and how they can be classified to avoid an "openwashing" of OEP concepts.

In summary, the literature on concepts of OEP shows a broad variety of definitions and understandings, and recently new approaches of empirical studies for more evidence on the impact of OEP. The increasing amount of the literature on this new topic led to recent review papers that try to synthesize findings (Bellinger and Mayrberger 2019, Koseoglu and Bozkurt 2018) and classify OEP activities based on recent literature (Bellinger and Mayrberger 2019, Mayrberger 2020).

However, our research question remains, i.e. do these papers on OEP give practical hints for educators to apply OEP, and if so, can practitioners translate them in their daily teaching activities? Or in other words: What benefits and barriers do educators see when reflecting on the ideas of OEP from the literature? In the following, we will introduce our methodology of the autoethnographic reflections, including the choice of papers we based our reflection on.

Methodology: an autoethnographic framework

Starting from our research interest to identify consistencies and inconsistencies between theoretical understandings of OEP and their practical implementation and adoption, we developed a research design consisting of four phases (Fig. 1). As a first step, we reviewed relevant literature on OEP, the preceding section sums up the main results. We marked relevant conceptual and empirical papers that either include explicit descriptions of practices or are based on practices coming from empirical work. Note that in this step we did not base our literature choice on determined structured categories.

The goal of the second step was the joint encounter via collaborative reading and discussion with the mentioned sources in order to check whether the identified literature covers the needs to answer the research question, i.e. "do these papers on OEP give practical hints for educators to apply OEP?" After this overview we observed that we all had a keen interest in dealing with four very diverse, yet in our view complementary papers. We chose four papers in English that enabled us to position ourselves towards their claims. We opted for Cronin (2017) for its strong empirical focus that allowed for us to reflect our experiences as practitioners, while Hegarty (2015) and Mayrberger (2020) propose lists of attributes that we wanted to discuss. This set of papers was accompanied by Wiley and Hilton III (2018) due to the strong focus on the relationship between OER and OEP lined with examples. Moreover, the papers represent different and temporal and geographical perspectives, with Hegarty from New Zealand presenting an early extensive concept of OEP from 2015, following Cronin presenting empirical data from Ireland based on practitioners in higher education, complemented by Wiley and Hilton III from the U.S. classifying explicit case studies of OEP, and Mayberger from Germany as a very recent paper that tries to synthesize existing OEP concepts and derive specific activities from them.

The third step covered mainly the phase of joint data collection. The work was guided by autoethnography as a methodical approach that was carried out in a particular collaborative manner, inspired by the project AEDiL (Autor:innengruppe AEDiL et al. 2021). The method of collaborative autoethnography is able to connect the individual experiences, perceptions and emotions of various researchers participating in the autoethnographic study (Chang 2013). The authors of this study, hereinafter named as practitioners, therefore wrote down their individual autoethnographic reflections of how the single theoretical OEP related papers met their individual academic teaching experiences and practices. The individual autoethnographic reflections are available as open data in the appendix (Suppl. material 1).

In the following sections, the authors' names of the four individual stories are abbreviated as follows:

- Sigrid Fahrer: S.F.
- Tamara Heck: T.H.
- Ronny Röwert: R.R.
- Naomi Truan: N.T.

The last and fourth step of the research design was characterized by collaborative approaches towards finding common themes among practitioners. The individual autoethnographic reflections of step three were therefore cross-read by other practitioners and commented in order to find overarching topics covered in at least two or three individual reflections. This resulted in four main overarching topics that group issues describing breaking points between theoretical approaches of OEP and concrete educational practices. These topics are explained in the following section.

Empirical findings: The four core topics

The practitioners gathered for a group discussion of the autographic reflections to identify common issues and overall threads found in these texts. Four main topics could be established. First, all practitioners were preoccupied with the relationship between *OER and OEP*, particularly the question of whether OER must be mandatory for OEP or can be simply an optional component. Second, the scope of *participation* was a common concern, as was how to truly engage in participatory learning culture with students. Third, the issue of the *values and attitudes* underlying OEP arose, specifically whether and how values and attitudes toward openness in education can be reflected in teaching practices. Fourth, the limitations to OEP caused by *institutional and structural boundaries* emerged as a critical topic and almost as a tipping point for OEP implementation. Despite the fact that these four issues are shared concerns, each of us has a unique perspective shaped by our experiences, as the discussion section of the overarching topics will demonstrate.

Necessary core or unnecessary complication: The role of OER in OEP

The relationship between OER and OEP is widely discussed in the research literature (for an overview, see Mayrberger (2020)) . The four articles examined in the autoethnographic studies also attempt to understand and explain the relationship between the two concepts. They arrive at different conclusions. Cronin understands the connection as just one "interpretation" (Cronin 2017, p. 2) , Hegarty (2015) finds OER to be "essential" to OEP , Mayrberger (2020) establishes that OEP "include the use and reuse of OER" and Wiley and Hilton III (2018) see a "close association" . The various models themselves are not always accurate, blurring the lines even further at times. For example in Mayrberger's text "how OER are defined remains unclear, as the "narrow view" mentions "OER along the

5R", which implies a difference to OER that do not or do not fully comprise the 5R." (T.H.). However, three interpretation lines can be found in the four research texts.

Reducing *OEP to the simple use of OER* as readily available material is viewed by some of the researchers as a counterproductive limitation. This results in being "relegated to the 'back benches'" (Hegarty 2015). Similarly, taking a strictly product-oriented approach to OER, thus focusing on technology, may be detrimental to OEP (Mayrberger 2020) . Putting too much emphasis on the material aspect of OER as OEP appears to some of us to be limiting (R.R., N.T.). However, using OER in class should not be dismissed lightly because most of us have used OER in class with positive results. (S.F., T.H., N.T.). N.T. even believes "that the potential of OER does not only lie in their creation, but also in students knowing their existence and being ready to re-use existing OER".

When *OER are seen as enablers of OEP in the context of the 5Rs*, they are defined as integral components of OEP in some studies (Hegarty 2015), sometimes even as a synonym to OEP (Wiley and Hilton III 2018, p. 135). The emphasis here is on the course work made possible by the 5Rs. Wiley and Hilton III (2018) give some practical examples which have proven to be helpful (T.H.). Although some of us experienced the idea of the non-disposable assignment as a motivating factor for students (N.T., R.R.) and teachers (S.F.), all of us are very skeptical of putting OER at the center of OEP. One of the main concerns is that creating OER presents too many challenges. Both students and teachers must have specialized knowledge in the field of openness (S.F., T.H.). Producing OER adds to the workload, especially when it comes to licensing all class materials (R.R.), and there are little incentives for lectures to do so (N.T.). Furthermore, institutional boundaries such as credit and course requirements may be incompatible with the production of OER (S.F., T.H.). OER created in class must be measured against academic quality standards, which cannot be guaranteed when it is student-produced (T.H., N.T.). And, students cannot be forced to openly license their material if they are dissatisfied with the outcome (N.T.). As a result, the assumption that OER are automatically beneficial for teaching requires revision, especially if they are only viewed from a teacher's perspective. (NT). In some cases, the creation of OER can even result in a different type of exclusion, for example, if students are not used to project-based learning methods (S.F.). This outcome might seem paradoxical at first glance, but Kerres (2019) contends that the mechanisms of openness and exclusion are both inherent in any discussion of open education. He argues further that understanding and analyzing openness and mechanisms of opening in relation to closedness and closure can help to counteract the often political-emphatic charge of the discussion about openness in scientific discourse (Kerres 2019). Despite our reservations about creating OER, most of us have had class experience producing OER, ranging from blogging over collections of interesting links to writing Wikipedia articles (S.F., T.H., N.T.).

When OER are classified as one component of OEP, the definition of OEP is broadened to include more than just course work (Mayrberger 2020). In that context OER can contribute to "a new culture of learning" (Hegarty 2015, p. 11). R.R. supports this claim by pointing out

that OER can help students gain a better understanding of broader concepts of learning. However, as Cronin (2017) demonstrates in her study, OER are still neglected in higher education because they do not play a significant role in the practices of the interviewed lecturers. For R.R., this omission is yet another indication that concepts focusing merely on the material side of OER are unimportant to open practitioners. He sees "contemporary pedagogy as way more than just the mode of working with teaching and learning materials and the licensing of that". Cronin (2017) goes further in reversing the relationship between OEP and OER, stating that since OEP are present in higher education, and OER are one element of them, OEP can lead to OER. Hegarty (2015) takes a similar stance, claiming that the OEP dimensions she developed, when implemented in policies and strategies can increase OER adoption.

As a conclusion, we recommend being less strict about OER as a requirement for OEP. OEP should be possible without the production of OER. The use of openly licensed material, as well as free content, should be recognized as open practice (T.H., N.T.). If OER are created in class, they do not have to be published openly; they can simply be used in the classroom and published through closed course management systems available at university (S.F., N.T.). And if the teaching method is to focus on the production of OER, it should be at least developed in collaboration with students (S.F., N.T.).

Participation: Beyond participatory tools to a culture of collaborative learning

A common thread running through the papers on OEP as well as our own perspective is the idea of *participation*. Broadly defined, *participation* refers to a culture of collaborative learning; narrowly defined, it mostly refers to participatory tools and technology (Mayrberger 2020, p. 1) . Participatory pedagogy in general is an approach geared towards fully involving the students as co-creators in the learning process, and participatory technologies in particular serve this purpose by giving all participants digital tools to interact with each other. All practitioners usually emphasize both aspects (see for instance the definition by Cronin (2017))), but "participatory technologies", the first attribute mentioned in Hegarty (2015) , sometimes takes over, relegating didactic and pedagogical considerations to the background. When moving from the narrow view on participatory tools and technology, the four texts highlight the orientation towards students or learners in how they co-create content, leading to OER. Participation then becomes a condition and consequence of a learner-centered view on learning and teaching, fostering "shared responsibilities" (T.H).

First, a decisive element in participation, easily forgotten when practitioners focus on participatory tools and technologies, is *students' motivation*, which emphasizes " the value of the social factor within learning processes" (R.R., referring to Cronin (2017)). Because they value "social learning" related to moving "away from a didactic lecturing style and to encourage more student engagement" (T.H), OEP stress students' co-creation and participation. OEP are then one of the pedagogical options ("a variant practice" according

to S.F.) focusing on "engaging students, fostering collaboration and technological enhanced learning" (S.F., referring to Mayrberger (2020)). In their discussion on "renewable assignments", as opposed to "disposable assignments" which are created for one course only and never shared or reused, Wiley and Hilton III (2018) indeed show that knowing that expanding the learning process beyond one specific class may be exciting and empowering for students (N.T.). As they become part of a larger community, "learners might be more motivated and take the results of their learning processes more seriously if it is published in the internet sphere" (R.R, N.T.).

Second, when moving beyond the mere use of participatory tools and technologies and considering how a participating culture can empower learners, a crucial aspect in designing participatory pedagogical practices consists in taking *students' needs and apprehensions* seriously (also see, as a counterpoint, *learners' motivation* in 4.4). Teachers always have to navigate between students' heterogeneous needs, including passing an exam, learning concrete skills, with more abstract and long-term oriented values such as openness (T.H.). Therefore, S.F. is for instance critical about "introducing more than two new tools", as too many unfamiliar tools, no matter how participatory, may be overwhelming, especially when the students are already conversant with the learning management system of their institution, which is usually closed. Moreover, our teaching experience shows that publishing their own material might decrease the students' feeling of trust and thus openness. Students' motives for *not* sharing their work—and thus not fully embracing a culture of participation towards the outside world—include, but are not restricted to the following motives: "they may benefit more from a personalized feedback that they will not share with others, they may be reluctant to upload versions of their work they consider incomplete or needing improvement, they may want to protect their public image, etc." (N.T.). How, then, do OER and OEP actually help create participatory, but also inclusive learning spaces that take into account students' needs (R.R.)? Openness can indeed become a vehicle for exclusion for the students who may not have the time or energy to engage in high-consuming open practices (S.F.). When openness is being perceived as a supplementary workload, students' boundaries may be crossed in the name of a participatory culture that considers 'sharing with the world' more important than what is happening in the classroom (Truan and Dressel 2021) .

Third, a key question in the discussion on participation asks *where* participation takes place, with a focus on the dynamic relationship between fostering OEP in the classroom and producing OER for an audience outside the classroom. Our teaching experiences invite us to recenter the discussion on *participation* at the level of the seminar: how much openness do the students want, do they benefit from it, are they willing to invest time and energy in making their work open? Merely publishing all teaching materials under a CC license does not mean that the practices leading to OER or based on OER are participatory (R.R., N.T.). A way to tackle the challenges associated with OER, then, is to shift the discussion from their *creation* to their *reuse*: the potential of OER also 'simply'—

and this is often overlooked—"in students knowing their existence and being ready to re-use existing OER" (N.T.) or in being able to find and critically assess "user generated content openly available on the internet" (S.F.). Another idea to foster openness while enabling students' participation is to move to a meta level, for instance by encouraging "a reflection on Knowledge Equity (who produces knowledge, who is legitimate, who is recognized, by what control mechanisms, etc.)" (N.T., also see Schoch & Kruschik, this issue). It is only by recognizing who feels legitimate to participate in knowledge production, especially as these issues are intertwined with gender, class, race, etc. that we can avoid that "the open teaching process can lead to a different form of exclusion" (S.F.). In sum, participation cannot only be viewed as a process oriented towards others, aiming at presenting results outside the classroom (N.T.), as "participation activities [often] start in a closed environment (LMS)" (T.H.).

Personal values push OEP, but we face challenges in reality

The understanding of *openness* and its associated values and attitudes differ in the papers' outline and argumentations. The four levels of OEP (Mayrberger 2020) focus on practical implementations of educators, like using and remixing OER or co-creating knowledge items. With their even more concrete teaching examples, Wiley and Hilton III (2018) as well report on practical implementations of OEP and open pedagogy.

In contrast, Cronin (2017) concludes from her interview study on the perception of being an open educator that "openness as not just a practice but an ethos, a way of being" (Cronin 2017, p. 13) . The teachers she interviewed are "motivated by personal values" (Cronin 2017, p. 13) and did not mention concrete practices like using OER. The eight attributes of Hegarty (2015) relate to personal attitudes (like developing trust and confidence for working with others) as well as concrete practices like interacting via social networks.

The different concepts of OEP show the two-sided connotation of *openness*. On the one hand, OEP and related concepts are discussed as attitudes or mindsets towards a different understanding of learning and teaching, based on personal values and embracing broader concepts like "open learning design" (Hegarty 2015, p. 4) , "the formation of a participatory culture" (Cocciolo 2009, p. 114) . On the other hand, the articles reflect on *translating* these attitudes and mindsets into concrete practices to foster a change in learning and teaching, i.e. "enactioned OEP" (Hegarty 2015, p. 11). The *translation* of Mayrberger (2020) comes up with four levels of OEP. In the autoethnographic reflections, the practitioners discuss both connotations at different levels, while being more critical with vague concepts of OEP that relate to values and attitudes and where a measurable practice is missing (N.T.).

Openness as an attitude or value is reflected as part of one's personality: "I try to understand myself as a teacher with open pedagogy understanding, though still without a clear definition" (R.R.). This attitude evokes an even broader understanding beyond in-class teaching practices, like "constant professional development" and relations to "social

learning" (R.R.). Concrete practices become part of this self-portrait as an open practitioner', like the "importance of peer-exchange" (R.R.). As such, educators should embrace specific OEP to allow themself to "feel" as someone with an open mindset: "The integration of research on teaching and learning as well as trying to research my own teaching practices, is key for me to feel as an open practitioner" (R.R.).

N.T. brings up a further perspective while reflecting on Cronin (2017). Her understanding is that "using OEP" means either "being open" and/or "explicitly teaching openly" (N.T.). Here, openness as an attitude and open practices are interwoven, one is not possible without the other. S.F. points at a similar understanding in Cronin (2017), i.e. "educators can shape and/or be shaped by openness". Interestingly, T.H. remarks that the lecturers interviewed in Cronin (2017) understand openness as a social value and do rather not see it as a teaching practice.

Valuable goals that shape practice according to the autoethnographic reflections are "focusing on engaging students in the process, fostering collaboration and technological enhanced learning" (S.F.). The learner-centered approach is at the core of OEP. Cronin (2017) relates this aspect to the value of social learning. Moreover, student co-creation and active participation are related to crucial elements of research-oriented learning (T.H.) (see also Heck and Heudorfer (2018)) .

Translating an open mindset into practices seems more difficult. The autoethnographic reflections show that a concreteness and clear distinctions between different levels of open practices might not reflect everyday teaching practices. One practitioner embraces the statements in Mayrberger (2020) as they show that "that OEP is not a binary concept in the sense that either teaching and learning practices are open only or closed only. [...] Therefore, full degrees of openness can maybe never be reached" (R.R.). The practitioner sees the four levels of OEP (Mayrberger 2020) as different "ranges" that show a "realistic impression of what OEP could be in concrete settings" (R.R.). Similarly, though arguing against a strict distinction of the four levels, T.H. states that her teaching is "highly fluctuating" and a concrete assignment of her teaching to one of the levels of OEP might be difficult. Although N.T. assigns her teaching experiences to some of the levels, she says she as well has difficulties to differentiate two levels.

Howeever, for N.T. and S.F. the four levels of OEP are helpful and stimulate their own reflections on their practices. The practitioners reflect on the different teaching contexts they experienced and the difficulty to fit those contexts to specific "levels of openness". Mayrberger (2020) as well says that OEP is "highly contextual". Thus, seeing the proposed levels as a range of OEP practices on a nominal scale would best resemble OEP in teaching scenarios. Wiley and Hilton III (2018) suggest four questions for practitioners to check if they are in line with OER-enabled pedagogy. These concrete criteria are seen as "too strict" and might impede "putting the creation of OER into practice" (S.F.). Reflecting their teaching practice, it seems that the practitioners are upholding their values on OEP,

but concurrently consider contextual situations. For example, students need learn to be open as well (T.H.), and forcing them to publish their material "might decrease their feeling of trust" (R.R.). Course size and exam requirements are other factors in real-life teaching that are not always conformable with students' creation of OER. Further structural boundaries exist, like discussed in the section below.

Structurally limited openness: OEP within given educational institutions and structures

Teaching and learning, whether realized in an open or closed manner, always takes place in a given setting and infrastructure. These structural conditions exercise a significant influence on concrete educational practices and thus frame the unfolding potential of openness within educational practices. All autoethnographic reflections investigated in this study cover certain aspects of these *structures* that represent breaking points between theories and practices when trying to implement OEP, mainly due to the fact that theoretical concepts often miss out to mention structures and their influence on openness. We understand *structures* in the context of educational practices as nonmodifiable institutional conditions under which concrete academic teaching and learning takes place. How and why do institutional structures limit opportunities to foster OEP proposed in theoretical accounts?

Within their reflections on their own educational practices, T.H. and S.F. underline the importance of *skills and knowledge* related to openness and OER as important prerequisites. A decisive element related to prerequisites, easily taken for granted when practitioners focus on openness in learning and resource co-creation, are students' and teachers' "knowledge about open licensing, knowledge about the use of open digital tools, collaborative working skills, and knowledge in didactic design" (S.F., referring to Wiley & Hilton III 2018). T.H. offers an example in correspondence with Mayrberger (2020): "If I'd aim for a narrower or stricter concept of OEP, a teaching scenario would imply that students create OER in a fully open environment (like an open Wiki). I did that once, with advanced BA students, who were asked to write blog entries (although at this time open licenses did play no role). My experience was that some students were not fully aware of the openness in this activity." Thus, OEP rely on necessary awareness building among learners. Our autoethnographic reflections point out that the concrete implementation of OEP often meets structural barriers in the sense of skill and knowledge limitations that need to be better addressed by institutional measures such as media skill development and separate openness awareness courses in order to reach "full adoption of open pedagogy principles including general frameworks and institutional and political governance" (Mayrberger 2020, p. 4) .

There are not only awareness and skills related aspects among learners that count for the implementation of open dimensions within teaching and learning practices. All individual autoethnographic reflections deal with the issue of inadequate *structural motivation and*

incentives for university lecturers to foster OEP. In most cases, the autoethnographic reflections question the normative assumption of highly intrinsically motivated teachers when it comes to openness aspects. In response to the empirical investigation by Cronin (2017)based on qualitative interviews with lecturers in higher education, N.T. identifies structural limitations for her own OEP: "In my view, the most central aspect is the reluctance to add to their already overwhelming academic workloads, as teaching remains undervalued in contrast to research when it comes to grant funding and professorships.

The time issue is crucial: as long as teaching in general and open education in particular are not as valued as research outputs, I do not see a culture of openness become more prevalent in academia." Similarly, S.F. relates personal motivational issues also to those of learners by questioning comparable normative assumptions within the framework of Wiley and Hilton III (2018): "The myriad of tasks are not only overwhelming for the teacher and the lesson plan but for the students as well." All the different autoethnographic reflections are connected by the deep conviction that openness cannot be an add-on without any form of compensation. For teachers highly competitive academia and its research oriented incentive structure, compensation possibilities could (and maybe should) be taken into consideration: how does our OER output add up to career decisions and precarious working conditions (for an extensive discussion of the debate around precarious working conditions in academia commonly referred to #IchBinHanna (Bahr 2022).

Besides structural limitations related to the individual level such as motivation and skills, the different autoethnographic reflections also share similar views on the role of broader *institutional limitations* that influence the realization of OER and OEP. Within the reflection of S.F. in response to Wiley and Hilton III (2018), several concrete institutional factors are mentioned: course size, exam requirements and teaching infrastructure. The individual reflections value the fact that all investigated theoretical approaches highlight the importance of institutional support for OEP, but in practice, this is precisely what is missing. In response to Mayrberger (2020), R.R. makes clear that "academic teaching always takes place in a given setting and infrastructure. I often cannot choose the learning management system, nor the video conference tool, nor the way the lecture is embedded in the curriculum. Therefore, full degrees of openness can maybe never be reached." S.F. stretches the curve even broader and points to European educational contexts: "All in all, Cronin's framework got me into thinking about if and how the uniformity of higher education, shaped by the Bologna Process, and OEP, guided by a learner centered e.g. individualistic pedagogy, fit together." N.T. even sees OEP in the widest view, which entails the "full adoption of open pedagogy principles" with institutional support, as happening loosely coupled from institutional support, as "an approach I have never been able to adopt, as I design my classes independently of macrostructures at my university, like most lecturers in my department".

Conclusion

As our autoethnographic study demonstrates, theoretical concepts of OEP require a stronger foundation in the practical realities of academic teaching. Only then will they provide the necessary framework and helpful assistance to further OEP adoption. As a result of this shift, openness as an ethos and social value should take a back seat in favor of more "practicable" practices. We thus advocate for a focus on OEP that is less concerned with achieving the ideal of complete openness through the "royal discipline of producing OER" (S.F.), and more concerned with allowing a variety of practices with varying degrees of openness. This broader stance, for example, resonates with R.R.'s self-conception as "open educator with respective open practices though only parts of my concrete teaching practices might be considered as fully open" and reflects T.H.'s teaching experiences in higher education "as highly fluctuating, seeing it in total."

Above all, more emphasis should be placed on the contexts in which academic teaching is embedded. This includes both the student's needs and the discipline's requirements (S.F., T.H.) Other important aspects to consider in OEP are overall workload and the role of teaching in academic career (N.T.). OEP must extend beyond the classroom as well. Openness policies, on a structural level, can create more incentives and new opportunities for opening up teaching. "If universities introduce openness policies it might therefore be a wise idea to accompany it with propaedeutic courses that convey necessary skills for OEP" (S.F.) First and foremost, OEP should address pressing issues in higher education, such as using OEP to "foster social learning, especially in times of distance" (R.R.), reducing "inequalities within the classroom […] by working with OER" (R.R.) or combining OEP with a reflection on "Knowledge Equity (who produces knowledge, who is legitimate, who is recognized, by what control mechanisms, etc.)" (N.T.) (see Schoch & Kruschick, this issue).

Despite the debates, we value the four papers on OEP as sources of inspiration and tools for reflecting on our classroom experiences. This reflection, structured and deepened through the use of the autoethnographic methodology we developed, proves to be an important step not only in improving our own open teaching practices, but also in developing a more practice-oriented framework for OEP.

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Endnotes

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[*8] Authors appear in alphabetical order. All authors contributed to this article in equal measure.
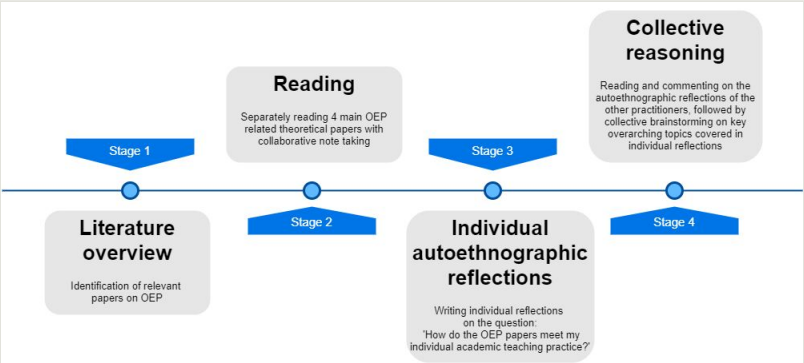
Figure 1.

Research design and process (own illustration).

Supplementary material

Suppl. material 1: Stories on Open Educational Practices in German Higher Education

Authors: *Fahrer, S., Heck, T., Röwert, R., Truan, N.*

Data type: Data set on autoethnographic reflection

Brief description: The stories are part of the autoethnographic reflections of the four practitioners. They are based on the following research papers:

Cronin, C. (2017). Openness and Praxis: Exploring the Use of Open Educational Practices in Higher Education. The International Review of Research in Open and Distributed Learning, 18(5). https://doi.org/10.19173/irrodl.v18i5.3096

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