

**Scope** Open practices in education focus on the actions of learners and teachers regarding openness. The sharing and collaborative creation of open educational resources (OER) is at the core of such practices. Digital infrastructures (DI) do not only provide environments for practices, but reflect ideas and implications of open practices through the functionalities they offer. This project studies the impact of digital infrastructures on open practices.

**Method** We analysed 37 DI from universities in German speaking countries. We coded the DI with 46 main categories and 184 sub-categories.<sup>1</sup>

**Results** Designs of OER-delivering DI differ, we grouped four different DI types. All DI show a lack of communication and collaboration functions. Four core functions are offered by DI.



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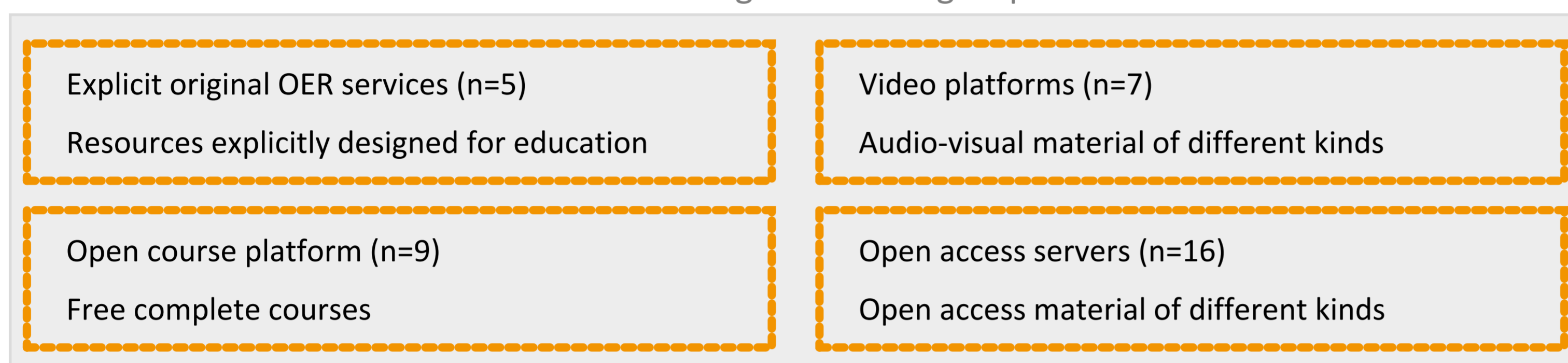


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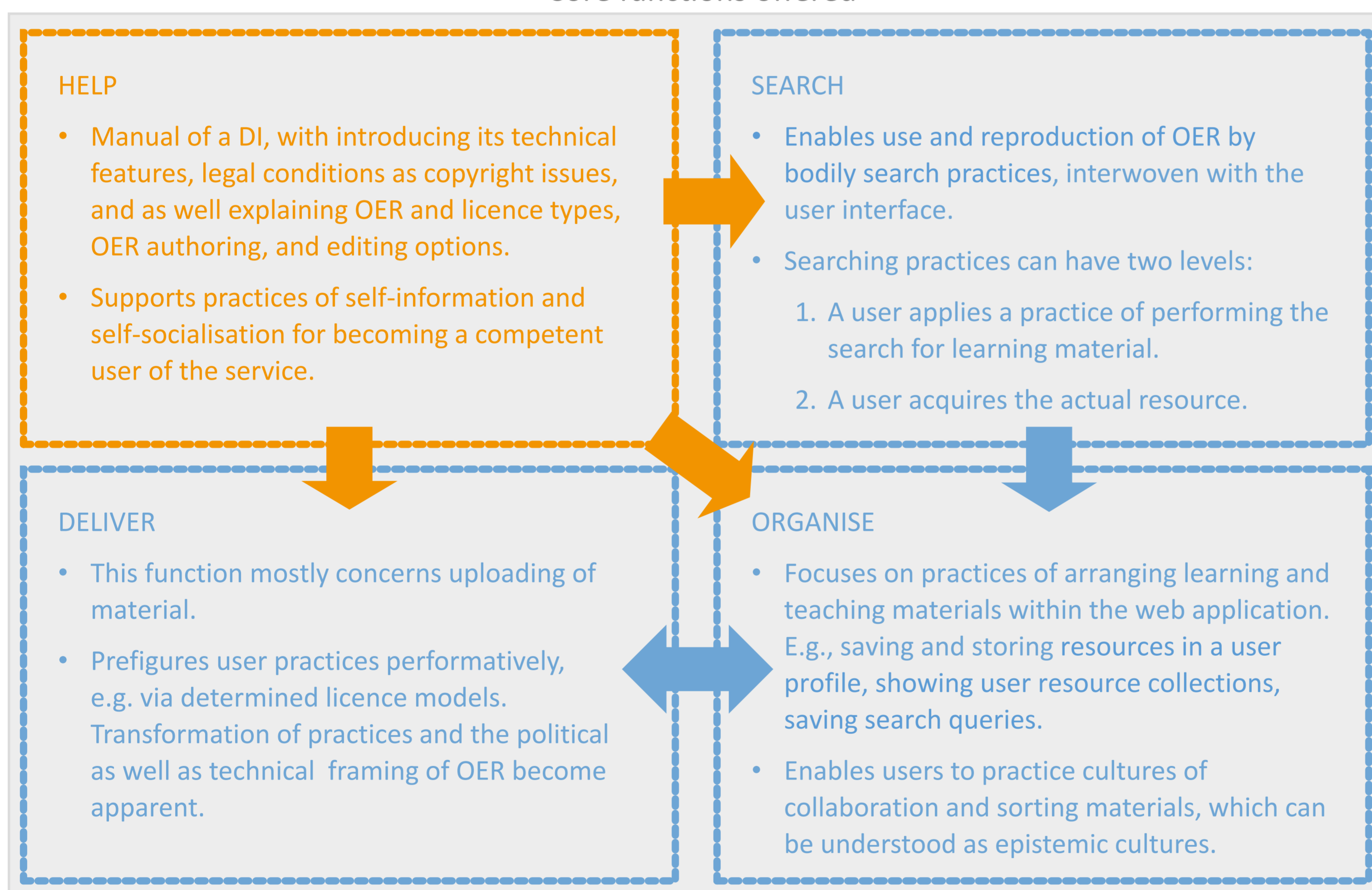


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## Main distinguishable DI groups



## Core functions offered



## Practical implications

<p><b>Define clear purpose and system category</b></p> <p>OER-specific DI are manifold, but we lack a categorisation of different DI types. This would help users find their way through the DI ecosystem.</p> <p><b>Apply proper filters for different OER</b></p> <p>The broad OER definition (see UNESCO) is not helpful for this categorisation, as DI might then provide resources explicitly designed for learning and teaching amongst open access scientific literature and data. The search experience might then be weakened unless appropriate metadata (resource type) is available.</p> <p><b>Practical example</b> A discipline-specific platform with search function and collaboration options, combining repository features and active participation elements: SocioHub (<a href="https://sociohub-fid.de/">https://sociohub-fid.de/</a>).</p>	<p><b>Be aware of target groups</b></p> <p>OER are intended for either educators or learners, or both groups. Currently, DI resemble a kind of digital library for educators, others a virtual learning platform. A potential user needs to be aware of the target group.</p> <p><b>Offer communication and collaboration</b></p> <p>A main element of the OER idea is the active participation and sharing of material by educators and learners. Current DI often do not provide opportunities for interchange and collaboration between OER creators and learners.</p>
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<sup>1</sup> For a full description and detailed results refer to <https://doi.org/10.17605/OSF.IO/RMFK3>

Project references:  
Heck, T., S. Kullmann, J. Hiebl & Schröder, Nadine, Otto, Daniel, Sander, Pia, (2020): Designing Open Informational Ecosystems on the Concept of Open Educational Resources. Open Education Studies 2: 252–264.

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## Reflecting Open Practices on Digital Infrastructures

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In academia, science is always interwoven with education. Thus, open education has to be an important component of open science. While earlier concepts of open practices emphasized the use and creation of open educational resources (OER), current models of open educational practices (OEP) aim to frame concepts of openness in learning and teaching. Researchers have been investigating the meaning of openness and its diverse interpretations with respect to aspects of open pedagogy (Wiley & Hilton III, 2018), empowerment, inclusion, and social justice (Koseoglu et al., 2020). In Germany a newer media didactical discourse proposes to enrich the debate of OER infrastructure with concepts of OEP (Bellinger & Mayrberger, 2019).

Open infrastructures, services and tools are not only part of open science initiatives but as digital objects they influence the knowledge and practices of their users. Thus, they shape the way we are able to practice openness. Our research therefore draws upon current functionalities of higher education services that provide open learning and teaching resources. We asked: How might open educational practices be shaped by current functions in digital services for learning and teaching resources? To answer this question, we investigated 37 German, Austrian and Swiss higher education services providing open learning and teaching material (e.g., OER repositories, learning management systems, video platforms, publication servers). We examined the functions of those services with regard to conceptual ideas discussed on OER and OEP (Santos-Hermosa et al., 2017; Zervas et al., 2014). We identified diverse core functions of current services that we will discuss regarding the needs of users who want to adapt OEP. Infrastructures do not only allow the reuse and sharing of OER, but also convey the model of open educational resources in their media performance. It is striking that current services concentrate on the searching and finding of open educational resources, but lack the idea of open collaboration and communication between teachers and learners.

Our poster contributes to how infrastructures can better support OEP and lead to a better use and acceptance of OER among scientific communities. It provides useful insights for the open science community into how to develop infrastructures that foster open educational practices.

### References

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