



Das Potenzial offener Infrastrukturen für Innovationen in der Bibliotheks-suche am Beispiel von Open Knowledge Maps

Peter Kraker, Doron Goldfarb, Lars Kaczmirek,
Chris Schubert, Franziska Krauss & Oliver Lehner

1. Österreichischer Bibliothekskongress
5. Mai 2023

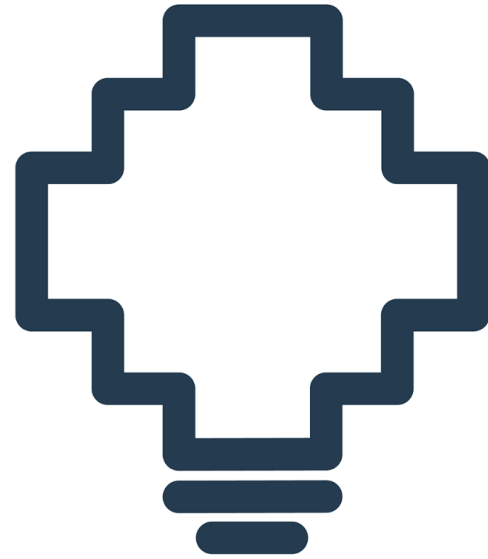




SARA GIRONI CARNEVALE

Scientists are drowning in COVID-19 papers. Can new tools keep them afloat?

Identify relevant concepts

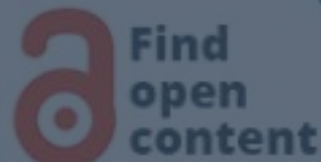


OPEN
KNOWLEDGE MAPS

Irrelevant to your research



@OK_Maps



Who we are

Open Knowledge Maps

is **a charitable non-profit organization**

dedicated to dramatically **improving the visibility of scientific knowledge**

for science and society alike



OPEN
KNOWLEDGE
MAPS

Overview of heart diseases





beta

Map a research topic

Get an overview - Find papers - Identify relevant concepts



PubMed (life sciences)

BASE (all disciplines)

[Refine your search](#) ▾

digital education

GO

Try out: [digital education](#) [climate change AND impact](#)

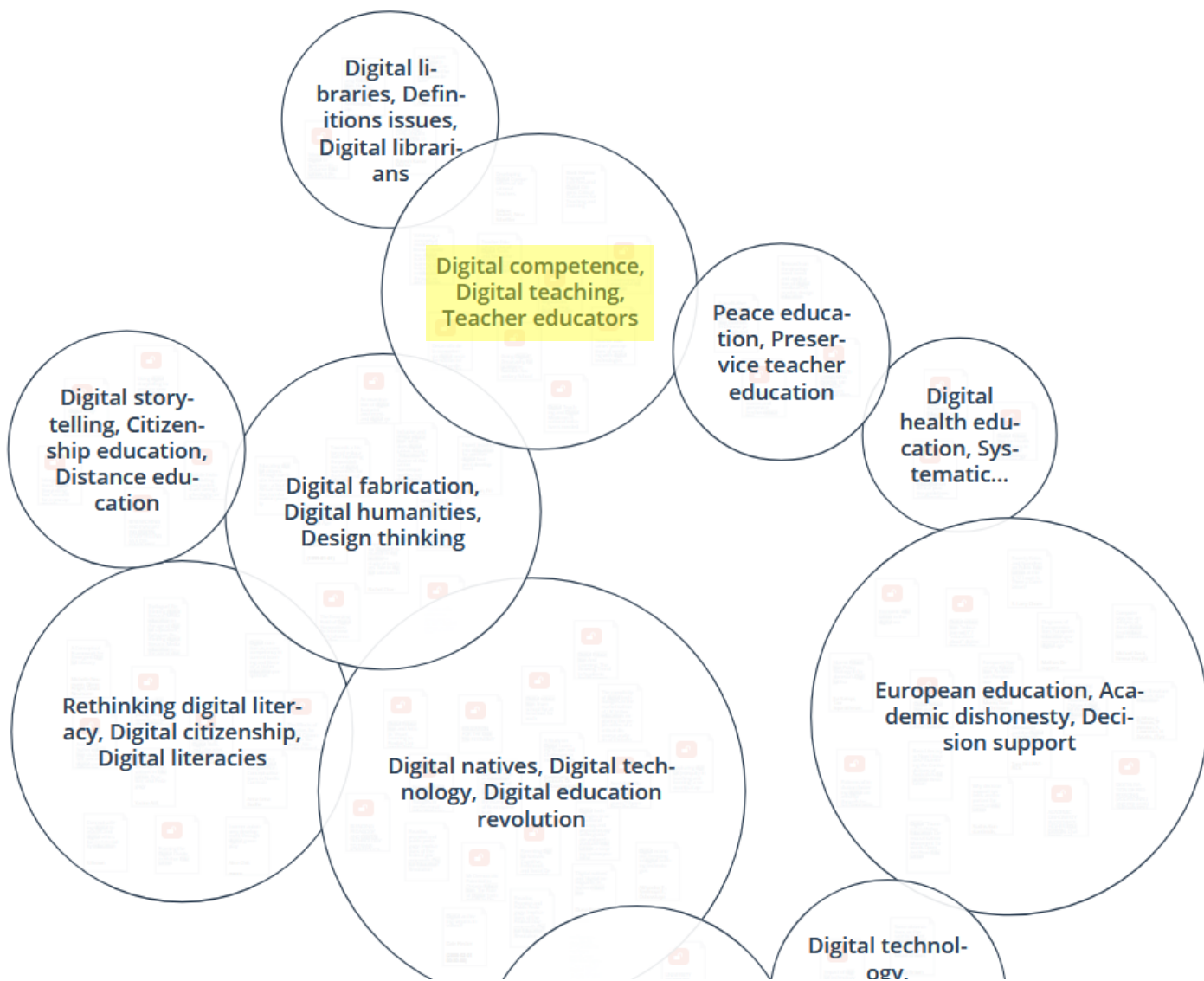
[What is Open Knowledge Maps?](#)

Based on
240+ million
documents

<https://openknowledgemaps.org>

Overview of **digital education**

100 [most relevant](#) documents (51 open access) Source: BASE Until 16 Feb 2021 [Document types](#) [High metadata quality](#)



Hide list (100 items)

show: **Any** ▾

sort by: **Relevance** ▾


Conceptualizing digital literacies and digital ethics for sustainability education

S Brown in Brown, S 2014, 'Conceptualizing digital literacies and digital ethics for sustainability education' *International Journal of Sustainability in Higher Education*, vol 15, no. 3, pp. 280-290. DOI:10.1108/IJSHE-08-2012-0078 (2014-08-14)

[link]: <https://www.research.manchester.ac.uk/portal/en/publications/conce...>

Purpose – The purpose of this paper is to discuss the need for integrating a focus on digital literacies and digital ethics into sustainability education, proposing a conceptualization of these for sustainability education. Design/methodology/approach...

Area: [Rethinking digital literacy](#), [Digital citizenship](#), [Digital literacies](#)

 open access

Digital Education And Learning: The Growing Trend In Academic And Business Spaces—An International Overview

P. K. Paul, P. S. Aithal (2018)

[doi]: <https://doi.org/10.5281/zenodo.1292856>

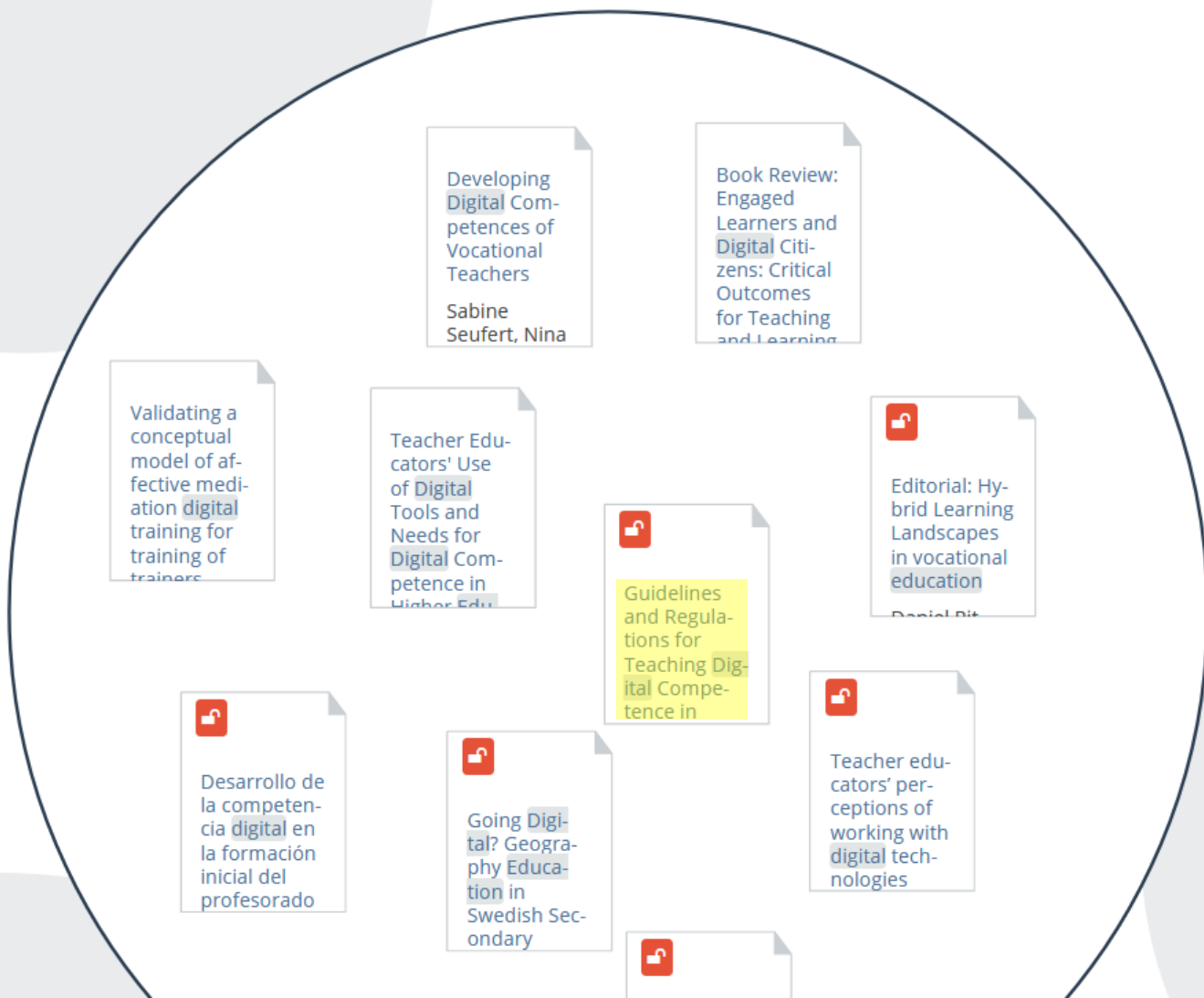
Abstract ; The world becomes Digital day by day and thus activities, features and sectors and different spaces are highly associated with Digital Tools, Techniques and Technologies. Education domain becomes highly technology enabled in recent past an...

Area: [Digital natives](#), [Digital technology](#), [Digital education revolution](#)

Paradox, promise and public pedagogy: implications of the fed- 

Area: Digital competence, Digital teaching, Teacher educators

[← Back to overview](#)



Hide list (10 items)

Search within map...

show: Any ▾

sort by: Relevance ▾

Validating a conceptual model of affective mediation digital training for training of trainers (TOT) in education through expert reviews

LINK

Siti Nurhazzalilla Omar, Sobihatun Nur Abdul Salam, Fauziah Abdul Rahim (2019)

[link]: <http://repo.uum.edu.my/26995/>

Training on affective mediation to TOT using digital tool is needed to motivate trainers to learn. However, to develop a digital training tool that will meet the training's objectives has require a model to be based on. Thus, this paper describes the...

Area: [Digital competence](#), [Digital teaching](#), [Teacher educators](#)

open access

Guidelines and Regulations for Teaching Digital Competence in Schools and Teacher Education: A Weak Link?

PDF

Bård Ketil Engen, Tonje Hilde Giæver, Louise Mifsud in *Nordic Journal of Digital Literacy*, Vol 10, Pp 69-83 (2015) (2015-01-01T00:00:00Z)

[link]: <https://doaj.org/article/141634970a3547bba0b28dd852322600>

Abstract Teacher education has recently been criticised for not fulfilling its obligation to adequately prepare teachers to utilise digital tools in the classroom. In this paper, we raise the question of why Norwegian teacher education does not prepa...

Area: [Digital competence](#), [Digital teaching](#), [Teacher educators](#)

open access

Teacher educators' perceptions of working with digital tech-

PDF

Validating a conceptual model of affective mediation digital training for training of trainers

Desarrollo de la competencia digital en la formación inicial del profesorado

Become a supporting member

1 of 15 Automatic Zoom

Nordic Journal of Digital Literacy, volume 10, no 2, 2015 p. 69–83
ISSN online: 1891-943X

PEER REVIEWED ARTICLE

Guidelines and Regulations for Teaching Digital Competence in Schools and Teacher Education: A Weak Link?

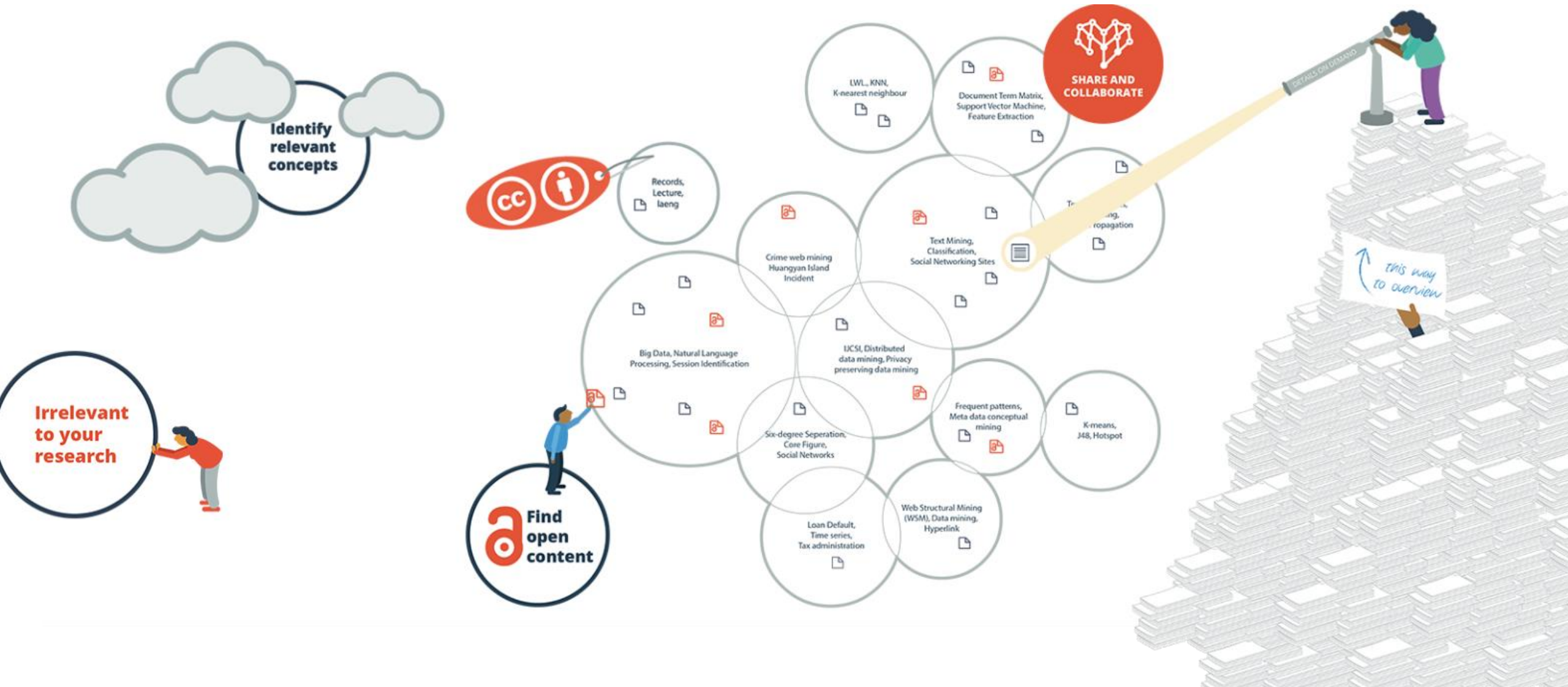
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louise.mifsud@hioa.no

ABSTRACT

Advantages



How it works



An Open Knowledge Maps visualization presents you with a **topical overview** for your search term. It is **based on the 100 most relevant documents** from either **BASE** or **PubMed** for your search term.



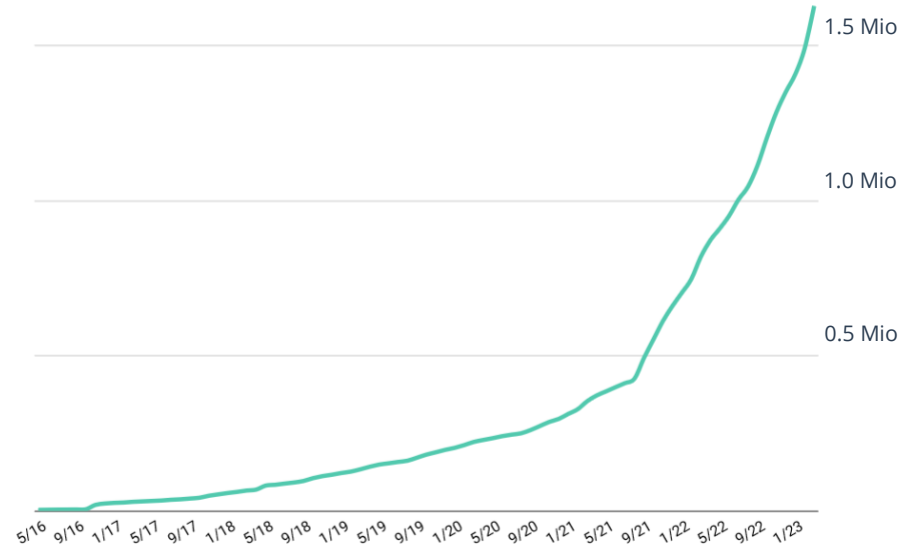
We use **text similarity** to create the knowledge maps. The algorithm groups those papers together that have more words in common in the metadata.

The journey so far

We are the largest visual search engine for research



GROWTH OF KNOWLEDGE MAPS



1.5+ million knowledge maps created

100,000+ monthly visitors

5000+ participants in workshops



FEATURED IN

nature

futurezone.at
TECHNOLOGY NEWS

Open science
conference

AIMS

Hacker News

ScienceGeist
Everything about research

moz://a
festival

AWARDS

ÖSTERREICHISCHER PREIS
FÜR FREIES WISSEN.

OPEN MINDS [The Austrian
Open Source Award]

All of our services are free & open



Our offering includes:

- ✓ Innovative search and discovery services
- ✓ Integrations for BASE, PubMed, and OpenAIRE
- ✓ A wide range of training activities and materials
- ✓ Our award-winning visualization software
- ✓ Community support & engagement programs
- ✓ Institutional integration via Custom Services





Custom Services



Custom Services in a nutshell

Enable 3rd parties to **embed Open Knowledge Maps services** in their own discovery systems

Co-created with our supporting members and community

Integrators can set individual parameters, including the ability to **restrict knowledge maps to their own data sources**

Available as **easy-to-install cloud components**



Search Resources and Users in Social Sciences and Humanities

[Search](#)

SEARCH TIPS : [femicide](#) [science ouverte](#) ["open access"](#) [\(fair OR "open access"\) AND publishing](#)

<https://gotriple.eu>

84.848 results

Documents 84.595

Projects 252

People 1

Your Search

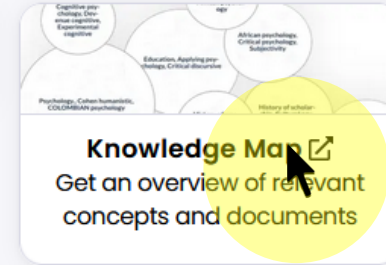
digital education


Search



List

Visual




Knowledge Map 

Get an overview of relevant concepts and documents



Streamgraph 

Analyze trends over time and discover related documents

Sorting Relevance 

Presentation: Digital innovation in education. Digital innovation in education.


Gutiérrez Castillo, Juan Jesús

Other, 2020-01-01

De sobra es conocido por todos, que el ya no tan nuevo siglo XXI comenzaba con desafíos para las instituciones educativas, derivados, entre otros aspectos, por el uso de las tecnologías de la información y comunicación. Investigaciones llevadas a cabo por autores como Schröder y Krüger...

Filter Documents

Discipline

Search 

Education

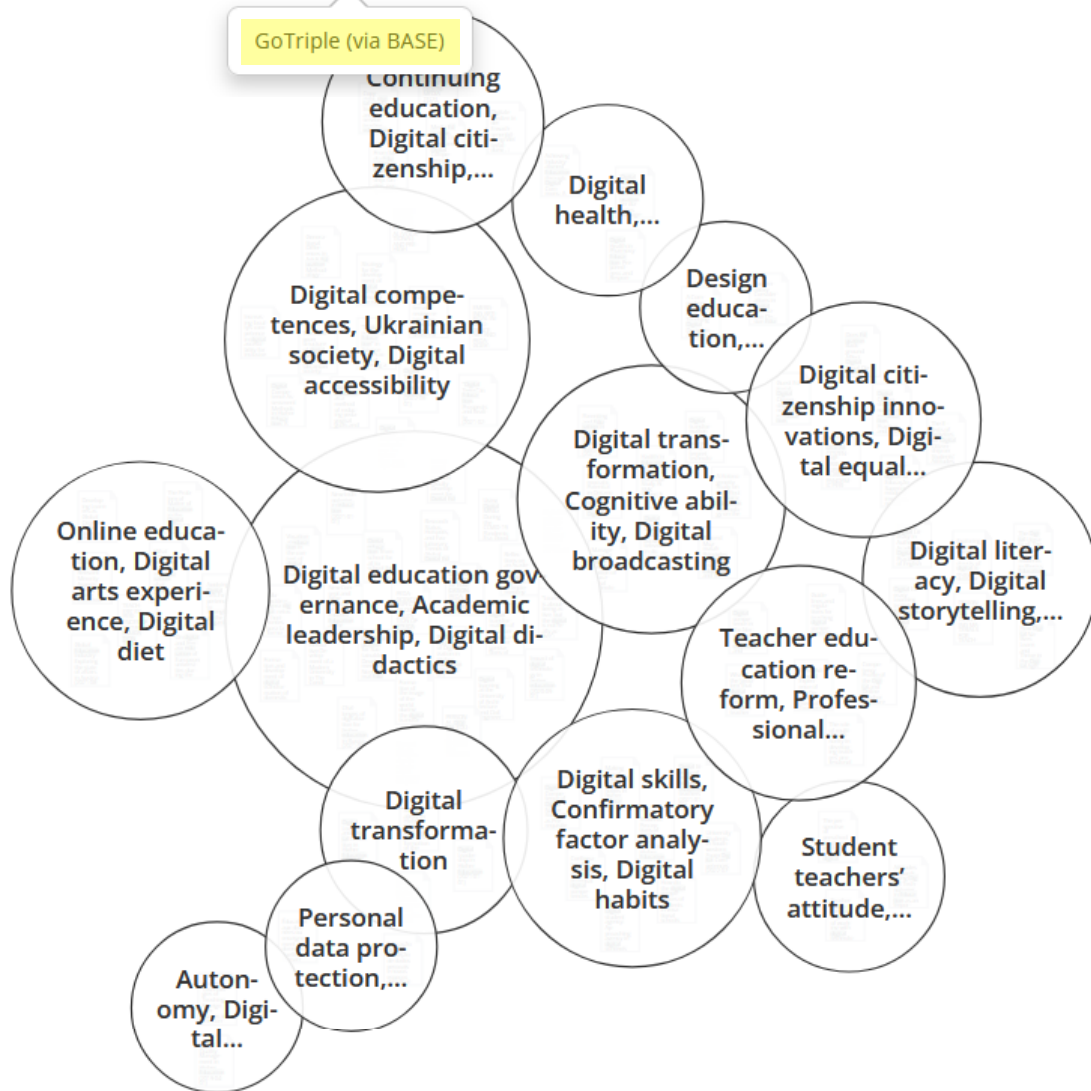
56.175 

Sociology

19.150

Knowledge Map of digital education

100 most relevant documents Data source: GoTrip... 1 Jan 1802 - 28 Apr 2023 Document types All languages Data quality [More information](#)



Overview (100 documents)

Search within visualization show: Any sort by: Relevance

journal/newspaper article

“Learning is about being active, but the digital is not really active”: physiotherapy teachers’ attitudes toward and experiences with digital education (2022-09-09)

Yngve Røe, Tone Dahl-Michelsen
Journal of service theory and practice ; 1-11
 [link]: <https://hdl.handle.net/11250/3041025>

Background: Digital education is expected to transform higher education teaching and learning. Despite high expectations, higher education teachers have been slow to implement active digital learning. Objective: The aim of this study was to investi-...

Cite as Export

Area: Digital education governance, Academic leadership, Digital didactics

journal/newspaper article

Digital Learning and Digital Institution in Higher Education (2023-01-01)

Mamdouh Alenezi
Education Sciences, Vol 13, Iss 88, p 88 (2023)
 [doi]: <https://doi.org/10.3390/educsci13010088>

Higher education institutions are going through major changes in their education and operations. Several influences are driving these major changes. Digital transformation, online courses, digital-navy students, operational costs, and micro and na...

Cite as Export

Technical setup



**OPEN
KNOWLEDGE
MAPS**



University Library

Q digital education

30.048 results for digital education

Knowledge Map

Knowledge Map overlay content:

- Digital fabrication, Design thinking, Construction management education
- Digital libraries model, Information science education, Curriculum for library
- Digital humanistic education gov
- Digital competence, Digital teaching, Teacher educators
- Digital storytelling, Leadership education, Distance education
- Thinking digital literacy, Digital citizenship, Digital literacies

University Blog

Explore our recent research on digital education

January 21

share

Knowledge Map overlay content:

- Digital fabrication, Design thinking, Construction management education
- Digital libraries model, Information science education, Curriculum for library
- Digital humanistic education gov
- Digital competence, Digital teaching, Teacher educators
- Digital storytelling, Leadership education, Distance education
- Thinking digital literacy, Digital citizenship, Digital literacies



 **Aggregator**



 **Institutions/
platforms**

ETH zürich

ETH-Bibliothek

enKORE

TU BIBLIOTHEK
WIEN Your knowledge hub

GoTriple
BETA

Use cases

Complement existing discovery systems such as a library catalog or a document search

Make resources other than text (e.g. research data, images) more visible and better discoverable

Integrate visual overviews **in other areas of your digital services**, such as a news page or a research collection

TU Wien Bibliothek & OKMaps

Motivation

Elaborate new pathways on exploratory literature search

Improve interoperable harmonisation of the CatalogPlus content, by Metadata transformation of MARC21 to DublinCore, set up an OAI-API

Scope: Open Access E-Media

Embedded as a SDG (UN Sustainable Development Goals) Use Case, by a preselected Query Store



TU Wien Bibliothek & OKMa

Anmelden Menü

TU Bibliothek
WIEN Your knowledge hub

NEUE SUCHE **TU WIEN**

Ergebnisse verbessern

Auch E-Ressourcen ohne Volltext zeigen

Suche im Volltext

Sortieren nach Relevanz

Nur zeigen

- Gedruckte Werke (5.085)
- Online-Ressourcen (1.496.285)
- Zeitschriften/Zeitungen (201)
- Bibliothekssystem (Alma) (20.195)
- Peer-reviewed Journals (978.811)

Mehr anzeigen

Bibliothek

- TU Wien Hauptbibliothek (3.756)
- E192 Institut für Logic and Computation (655)
- E193 Institut für Visual Computing and Human-Centered Technology (187)

Extern suchen in

- Open Knowledge Maps (BASE)
- Open Knowledge Maps (Timeline)

artificial intelligence

ERWEITERTE SUCHE

Anmelden, um vollständige Ergebnisse zu erhalten und Exemplare zu bestellen Anmelden VERWERFEN

0 ausgewählt SEITE 1 1.499.896 Ergebnisse Personalisieren

1 ZEITSCHRIFT
International journal for artificial intelligence in engineering
1986-1988: Woburn, Mass. : Computational Mechanics Publ. 1986 - 1988 [Erscheinungsverlauf: 1.1986 - 3.1988]
Verfügbar in TU Wien Hauptbibliothek / Magazin (DAT - Zeitschriften) [500215 II]

2 ZEITSCHRIFT
Engineering applications of artificial intelligence (Online) Engineering applications of artificial intelligence
International Federation of Automatic Control.
Oxford ; : New York : Pergamon 1988 - [Erscheinungsverlauf: Began with v. 1, no. 1 (Mar. 1988).]
PEER REVIEWED
Online-Zugriff

3 ZEITSCHRIFT
Engineering applications of artificial intelligence : the international journal of intelligent real-time automation ; an affiliated journal of IFAC, the

Prototype Online at:
<https://catalogplus.tuwien.at/>

OPEN KNOWLEDGE MAPS
A visual interface to the world's scientific knowledge

Search About Team Community Projects News FAQs Get in touch Become a supporting member

topic cluster

Examining the Intelligence in Artificial Intelligence (2020)
David Cycleback
(link) <https://philpapers.org/rec/CYCL21>
The following looks at several problems and questions concerning our understanding of the word 'intelligence' and the phrase 'artificial intelligence' (AI), including: how to define these terms; whether intelligence can exist in AI; if artificial intelligence in AI is identifiable; and what (if any) kind of intelli...

Area: Natural intelligence, Emotional intelligence, Brain

THE DEVELOPMENT OF LEGAL REGULATION OF ARTIFICIAL INTELLIGENCE IN THE REPUBLIC OF UZBEKISTAN (2022)
Bazorev Sardor Sohibjonovich
(link) <https://doi.org/10.5281/zenodo.7347238>
Abstract: The author of this article analyzes the necessity of using artificial intelligence in various spheres of our life. In addition, the author reviewed the conception of artificial intelligence. Besides, it has been put forward the proposals on development of legal framework of artificial intelligence...

Area: Artificial intelligence in foreign countries, Intelligence artificial distributed, Neural network

Integration of artificial intelligence into public life: some ethical and legal problems (2019)
Abasov V. Mulyukhan
(link) <https://doi.org/10.21638/obdu.4.2019.303>
The spread of artificial intelligence systems raises a number of technical, philosophical, legal and ethical issues related to the admissibility of using artificial intelligence in various fields, and the need to comply with ethical standards in the creation of artificial intelligence systems, as well as the po...

OPEN KNOWLEDGE MAPS
A visual interface to the world's scientific knowledge

Search About Team Community Projects News FAQs Get in touch Become a supporting member

timeline

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Theoretical and Legal Bases of Artificial Intelligence Punishment System Development (2020-11-22)
Kamil Rustamovich Gafurizoda, Zarina Lidzovna Khasomova, Elira Leonidovna Sidorenko...
Revista San Gregorio N.º 41 (2020): Revista San Gregorio. SPECIAL EDITION NOVEMBER 2020; 2678-7507. 1390.
(link) <https://revista.sangregorio.edu.ec/index.php/REVISTA/SANGREGORIO/article/view/1496>
The article discusses the problematic aspects of artificial intelligence technology application. The author's classification of artificial intelligence types is proposed, depending on their material expression: artificial intelligence, etc. artificial intelligence carrier and artificial intelligence. The stud...

TU Wien Bibliothek & OKMaps

Issues & Next steps

Workflow via BASE can be challenging, e.g. separate instance dependencies of TU Wien Services (repositUM, CatalogPlus)

Interoperability with heterogeneous data sources (new requirement)

Complete & improve the harvesting of CatalogPlus content

Improve the mapping quality, e.g. Metadata enrichment of SDG annotations

Elaborate OKMaps representation services via user centric elaboration



Icon: Flaticon.com

Vienna University Library

Provide discovery tools **for resources in all disciplines**
and the **for research data in social sciences**

Harvested by BASE and **visualized by OKMaps**

Improving desk research

Piloting visual discovery for data sets

Find research datasets at AUSSDA - The Austrian Social Science Data Archive

The image displays a composite view of the AUSSDA website. On the left, a sidebar titled "Open Knowledge Maps" explains the visual search tool. The main content area shows a search bar with the text "aussda election" and a "GO" button. Below the search bar, a "Knowledge Map of aussda election" is shown, featuring a network of interconnected nodes representing various election-related topics. On the right, a list of search results is visible, including "Austrian Presidential Election (Part 6) 1998 ... (2022)" and "AUTNES Content Analysis of Party Websites 2013 (SUF edition) ... (2022)".

Open Knowledge Maps
Visual search in the AUSSDA database and an overview of AUSSDA's dataset? We implemented a visual search as a collaboration between Open Knowledge Maps and AUSSDA. It has intuitive interaction options for zooming in and navigating to individual datasets.

Where to start? Try just the keyword `aussda` for an overall overview. For a more specific selection, we recommend combining the search word with a second word, e.g. `aussda election` or, for some of our historical datasets, `aussda gfk`. For a worldwide search, leave out the keyword `aussda`.

Hints: Use English search terms for better search results in the AUSSDA database. The search results refer to datasets worldwide. We have preset the search only to datasets, taking the newest entries first. You can customize the search settings under *Refine Search*.

Refine your search

Knowledge Map of aussda election
74 documents. Data source: BASE. Until 9 Nov 2022. Document types: Data quality. More information.

Nodes in the knowledge map include: General election, Voting...; Climate opinion, Coalition...; Affects polling, Austrian...; Panel study, AUTNES...; Austrian presidential election; Election panel, Austrian...; Austrian Freedom...; European parliament elections, Election campaign 1999, ...; 2013 SUF edition, Panel study 2013, Election survey; Manual content analysis, ...; Presidential election, Austrian domestic, Election...; National Council, Election national, Omnibus...; ORF...; Federal presidential election, Election federal, Omnibus survey Personalities; AUTNES content analysis, Analysis party, Analysis of party.

Search results:
Austrian Presidential Election (Part 6) 1998 ... (2022)
GfK Austria
[doi]: <https://dx.doi.org/10.11587/vagalg>
Topic: Austrian presidential election ...
Area: Austrian presidential election

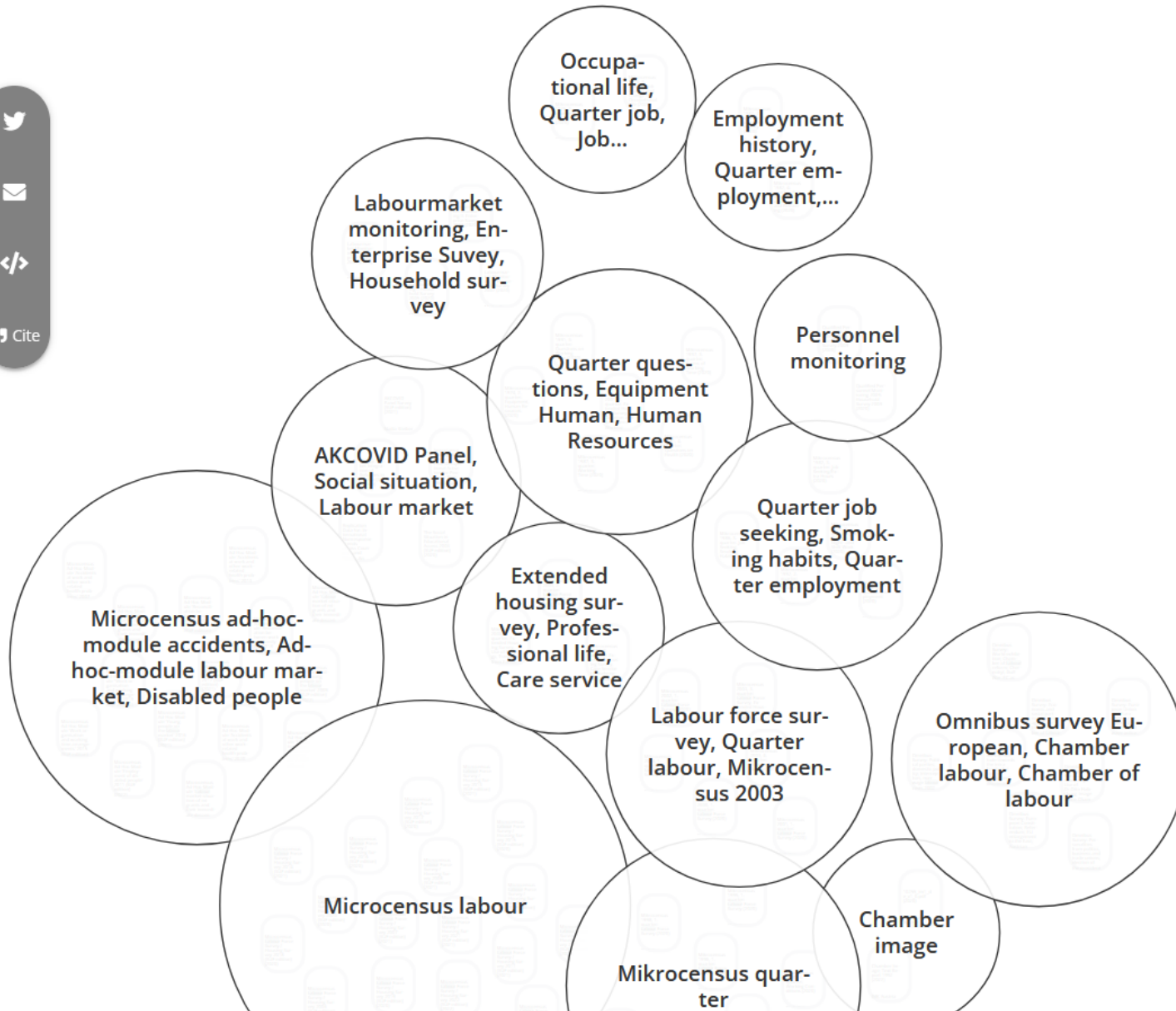
AUTNES Content Analysis of Party Websites 2013 (SUF edition) ... (2022)
Wolfgang C. Müller, Anita Bodlos, Martin Dolezal, Nikolaus Eder, Laurenz Ehmsen-Jedenastik...
[doi]: <https://dx.doi.org/10.11587/tqvslq>
Full edition for scientific use. The dataset "AUTNES Content Analysis of Party Websites 2013" covers all party websites of parties gaining at least two percent of the votes in the 2013 national election. The party web...
Area: AUTNES content analysis, Analysis party, Analysis of party

European Parliament Elections, People, Election Campaign 1999 ... (2022)

Online at: <https://aussda.at/en/about-aussda/projects/open-knowledge-maps/>

Knowledge Map of aussda labour

87 documents Data source: BASE Until 19 Apr 2023 [Document types](#) [Data quality](#) [More information](#)



Overview (87 documents)

Search within visualization show: Any sort by: Relevance

dataset

Microcensus Ad-Hoc-Module 'Employment of disabled people' 2011 (SUF edition) (2022)

Statistics Austria
[doi]: <https://dx.doi.org/10.11587/iy6m6l>

Full edition for scientific use. In addition to the core variables of the Microcensus Labour Force Survey (LFS), the LFS also has so-called ad-hoc-modules (AHM) that can vary from year to year. The EU-LFS ad-hoc-module 2011 on 'Employment of...

File Export

Area: [Microcensus ad-hoc-module accidents, Ad-hoc-module labour market, Disable...](#)

dataset

Microcensus Ad-Hoc-Module 'Accidents at work and other work-related health problems' 2020 (SUF edition) (2022)

Statistics Austria
[doi]: <https://dx.doi.org/10.11587/j7bdjx>

Full edition for scientific use. In addition to the core variables of the Microcensus Labour Force Survey (LFS), the LFS also has so-called ad-hoc-modules (AHM) that can vary from year to year. The EU-LFS ad-hoc-module 2020 on 'Accidents at wor...

File Export

Area: [Microcensus ad-hoc-module accidents, Ad-hoc-module labour market, Disable...](#)

dataset

Chamber Image; Text Report 1992 (2022)

Vienna University Library Outlook

We are working on expanding the dataset search to include **all European data archives in the social sciences (CESSDA ERIC)**.

Several data archives in the CESSDA Data Catalogue are already included, totalling 20,000 ressources (from 26k) at <https://datacatalogue.cessda.eu/>

Community-based funding

We propose to fund Open Knowledge Maps and the Custom Services in a collective effort: organizations become supporting members and provide a yearly contribution.

In return, we invite our members to co-create the platform with us. Members become part of the Board of Supporters, which is directly involved in the decision-making process of what features and sources are implemented on Open Knowledge Maps.

Supporting members



Participatory approach



This means:

- ✓ Open licences for content, data, and source code
- ✓ Easy integration in community infrastructure
- ✓ Co-creation of platform with our community
- ✓ Community involvement in governance
- ✓ Equitable balancing of stakeholder needs
- ✓ Community-based funding & engagement



Thank you for your attention!

Contact:

twitter.com/OK_Maps

[linkedin.com/company/okmaps](https://www.linkedin.com/company/okmaps)

pkraiker@openknowledgemaps.org



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KNOWLEDGE
MAPS