

# Designing and managing repositories

OTT Consulting

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# OTT support to EdLabs in 2024



Convene the EdLabs to facilitate learning between them, acting as a broker



Support EdLabs with practical, operational advice on common areas of need as they start their implementation phase



Support EdLabs to engage with the wider field, keeping them updated on new developments on an ongoing basis

## Guiding questions

- 1. What is best in terms of sustainability, that the functions/services are kept in-house or outsourced?
- 2. What criteria should be used for selecting and categorizing evidence?
- 3. What aspects to consider to secure acceptance and use of the services from the widest range of actors possible?: at national and subnational level and from academics from more local actors not as familiarised as might be the former.

- 4. How to design for usability?
  How can it be easily searched and used?
- 5. Technical aspects: what is the repository exactly? (an Excel sheet, a folder, a dashboard/portal)?
- 6. How to ensure the repository will be used on an ongoing basis after its development-how will people find out about it?



### What is a repository? A working definition

Repositories are databases or platforms that store and provide access to information and resources pertinent to policy development, implementation, and evaluation.

This may include some or all of the following:

- Compiling evidence
- Categorising evidence
- Judging the quality of the evidence
- Analysing the evidence

"One of the drawbacks of (evidence gap) maps is that they show what evidence is there, but not what it says."

White (2021)



### Food for thought

The knowledge brokering pyramid

Source: White (2020a)





# Learning from others

### **Evidencia MIDIS**

- Evidencia MIDIS is a knowledge translation initiative led by the Peruvian Ministry of Development and Social Inclusion (MIDIS). This initiative, developed in 2017 is managed by the General Directorate of Monitoring and Evaluation as part of its activities linked to the management and use of evidence.
- Midis focused on a repository of the evidence produced by the ministry, i.e. the universe of studies was limited, thus, more manageable.
- They started using WordPress and only now, after 5 years of constant feedback from users they are migrating to a platform that responds to the needs we take here the importance of start small, learn, adapt
- The context helped a lot on the repository development and use: Peru has a legal framework that prioritises knowledge management
- The events organised around the repository were as crucial (if not more) for its use as the platform itself. The usage of the platform rocketed when there was an event attached to the publication of a new study



# Examples

### Examples: many different repositories...

- **Research repositories**-databases that aggregate research findings, and systematic reviews relevant to public policy. e.g *Campbell Collaboration* and *What Works Clearinghouse*
- **Legal repositories**-databases that store legal texts, statutes, regulations, and case law. E.g. *EUR-Lex and Congress.gov*.
- Policy Documents repositories-databases that contain policy papers, white papers, reports, and strategic plans e.g. OECD ilibrary, UN Digital Library and World Bank Open Data, Evidencia Midis
- Data repositories-provide access to statistical data, demographic information, and economic indicators e.g.
   World Bank Data, UNdata, government bureaus of statistics
- Evaluation and Impact Assessment repositories-store evaluations of policies and programs, including impact assessments and performance audits e.g *3ie Impact Evaluation* and *Global Development Network (GDN), Sinergia*
- **Geospatial repositories-**offer geospatial data, maps, and environmental information. *E.g. NASA Earth Observing System Data and Information System (EOSDIS)*



# ...and many different purposes

Uses of different evidence and gap maps

	Campbell-UNICEF child welfare megamap	CEDIL-3ie map of maps	CEDIL disability map	СНІ	Giving Evidence and Porticus	IMMANA	IRC outcomes to evidence framework	Mastercard Foundation	YEF
Identify more detailed mapping to be commissioned	Х	Х							
Identify systematic reviews to be commissioned				Х					X
Studies in map used for reviews	Х		Х	Х					X
Inform programme design							Х	Х	
Inform programme funding decisions					Х		Х	Х	Х
Inform primary study funding decisions			Х		Х	Х			х
Inform primary study design decisions			Х						
Provide content for evidence-based decision-making products			х	Х	Х		Х		Х

*Source: White* (2021)

### ...and varying definitions of 'quality'

"A new **analysis** in the **Review of Educational Research** finds wide variation on the kind of evidence that is required to show an education intervention is effective.

In fact, large research clearinghouses, set up to review the evidence bases of programs for practitioners, reach the same conclusion on less than a third of the education programs they review.

What that means is that a teacher or principal trying to choose a reading curriculum or tutoring program for students may find it recommended by one clearinghouse and rejected by another."

<u>Sparks (2024)</u>



#### Government Led: Evidencia Midis (Peru)

Description	Evidencia MIDIS is a knowledge translation initiative led by the Peruvian Ministry of Development and Social Inclusion (MIDIS). This initiative, developed in 2017 is managed by the General Directorate of Monitoring and Evaluation as part of its activities linked to the management and use of evidence.		
Objective	<ul> <li>Share evidence about social programs in an accessible and "user-friendly" way</li> <li>promote informed decision-making and strengthen transparency, accountability towards citizens regarding its management, and generate a community of support and support for the policy.</li> </ul>		
Evidence hosted	Evaluations of programs and initiatives implemented by the Ministry of Development and Social Inclusion;		
How it works	<ul> <li>Publish evidence informed outputs</li> </ul>		
Target Audience	Policymakers and decision-makers at the national and local levels, academics, think tanks, students, and international development officials		
Funding	Government of Peru		
Challenges	<ul> <li>Ensuring they had an institutional mandate.</li> <li>Initially only focuses on a narrow spectrum of actors at the national level though the Ministry's programs were being implemented at the sub-national level</li> <li>Evidence usability</li> </ul>		



#### Government Led: What Works Clearinghouse (US)

Description	Established in 2002, What Works Clearinghouse (WWC) is a digital library of educational resource. It is a part of an initiative of the Institute of Education Sciences (IES) at the U.S. Department of Education. The mission of the WWC is to be a central and trusted source of scientific evidence for what works in education. It is an important part of IES's strategy to use rigorous and relevant research, evaluation, and statistics to improve our nation's education system.		
Objective	Through systematic reviews to identify rigorous research, the WWC provides educators with credible and reliable evidence they can use to make informed decisions.		
Evidence hosted	Intervention reports, practice guides, quick reviews, systematic reviews, single study reviews and resources for educators		
How it works	Reviews the research, determine which studies meet rigorous standards, and summarize the findings. They focus on high-quality research to answer the question "what works in education?"		
Target Audience	Educators, policymakers, researchers, and the public.		
Funding	US Department of Education		
Challenges	<ul> <li>It appears to have difficulty keeping up to date with the research so it may not be current</li> <li>When a program is not listed on their database, it may be that it did not meet their criteria or they have not yet reviewed it, but it's not clear which.</li> <li>The WWC suffers from a lack of transparency in their policies and guidelines</li> <li>The conclusions they create in their reports can be misleading,</li> <li>Lack of consistency in the reviews</li> <li>Technical elements of the review process have been questioned</li> </ul>		



### Education Endowment Foundation (EEF), UK

Description	The EEF is the What Works Centre for Education, part of the UK's What Works Network. These centres aim to enable policymakers, commissioners, and practitioners to make decisions based on strong evidence of what works. As part of its mission, the EEF has created a repository of evidence-based resources to support teaching and learning for children aged two to 19 years old.		
Objective	This repository's main objective is to provide with practical guidance and support on key areas of teaching and learning. The provided resources are backed by 'the best available evidence' and cover a wide variety of topics to support teachers and practitioners 'make meaningful improvements in the classroom'. These resources are designed to be user-friendly, offering actionable recommendations and insights to help educators make informed decisions and improve classroom practices.		
Evidence hosted	<ul> <li>Toolkits: accessible summaries of evidence on different topics for teaching and learning. They contain information on the cost, impact and strength of the evidence behind different approaches, as well as detail on how effective a particular approach could be for socioeconomically disadvantaged children and young people.</li> <li>Resource hubs: Subject specific and more detailed content focused on topics such as leadership and planning as well as training and guidance on school-wide strategies.</li> </ul>		
How it works	EEF hosts evidence on its website by producing its own research, repackaging findings from evidence reviews, and publishing resources in accessible formats. The EEF conducts studies, including RCTs and systematic reviews to evaluate educational interventions. This evidence is then synthesized into practical resources such as toolkits, guidance reports, and implementation guides.		
Target Audience	Educators, policymakers, researchers, and the public.		
Funding	Department of Education UK		



#### Government Led: Sinergia (Colombia)

Description	The Reval Evaluation Repository facilitates access to the evidence generated by the National Planning Department (NPD) and by Government entities as a result of their evaluation processes. Under Sinergia, it also exists a Evidence Maps. It was created in 1994 and its structure has evolved since then			
Objective	The objective is to strengthen the institutionalization of the evaluation in Colombia and promote the use of information and evidence of the evaluations for decision making.			
Evidence hosted	Evaluations carried out by NPD and other government entities			
How it works	All the evaluations that are carried out are included in the portal. Search can be done by sector, type of evaluation, year of publication or the department that carried out the evaluation. Once the evaluation is found, it can be downloaded, get a technical summary, the summary of results, an infographic and in some cases a brief video with results.			
Target Audience	Decisionmakers			
Funding	Government of Colombia			
Challenges	The challenges are necessarily related to the wider context in which the evaluations are carried out, the institutionalisation of the use of evidence, and other factors. Since 1994 Sinergia has been adapting in different ways to address the most common challenges:  Limited evaluation design  Limited resources  Limited access to data, with little open access  Limited use of existing evaluations - very few visitors download results			
More info	https://sinergia.dnp.gov.co/evaluaciones https://www.cerlatam.com/wp-content//uploads/2022/03/2022-03-22-Documento-CONPES-Evaluacion_VDiscusionCiudadana.pdf			



# Collaborating to transform and improve education systems: a playbook for family-school engagement (Brookings)

Description	This repository compiles resources from the <u>Family-School Engagement Project</u> . Hosted on the Brookings website, it presents an overview of the research conducted under this project and provides related resources.		
Objective	The objective of the repository is to consolidate the outputs of this research, highlight learnings and tools, and share strategies to make them more accessible to the public.		
Evidence hosted	Evidence produced as part of the Family-School Engagement Project includes a <u>playbook and background research papers</u> . Additionally, the site hosts a <u>strategy finder</u> featuring over 60 global strategies focused on improving education systems through family-school engagement. These strategies can be filtered by geography, student age, tech level, and levers of change to ease navigation.		
How it works	Online dashboard searchable by country, student age, tech level & 'levers for change'		
Target Audience	Teachers, practitioners, decision makers, researchers		
Funding	n/a		
More info	https://www.brookings.edu/articles/collaborating-to-transform-and-improve-education-systems-a-playbook-for-family-school-engagement-strategy-finder/https://www.brookings.edu/articles/collaborating-to-transform-and-improve-education-systems-a-playbook-for-family-school-engagement/		



#### 3ie Evidence Gap Map (primary & secondary education)

Description	Donor funded/third party		
Objective	The purpose of this evidence gap map (EGM) is to provide easy access to the best available evidence on what works to improve education outcomes for primary and secondary school children in in low- and middle-income countries.		
Evidence hosted	Gap map compiles evaluations and systematic reviews.  Evidence portal compiles a wider range of research.		
How it works	Online database searchable by country, intervention, outcome, study design, population and other variables.		
Target Audience	Teachers, practitioners, decision makers, researchers		
Funding	n/a		
More info	Gap Map: https://gapmaps.3ieimpact.org/evidence-maps/primary-and-secondary-education-evidence-gap-map Evidence portal: https://developmentevidence.3ieimpact.org/search- results?search_text=&page=1&per_page=50&sort_by=relevance&filters=		



# Lessons learned

### Lesson 1: Repositories need political & institutional buy-in

- Repositories on their own don't facilitate use—they need capacities, incentives, buy-in around them
- Trotter at al. (2014) point to some of the implications of the many donor-funded institutional repositories in Africa:
  - While assisting in developing infrastructure and capacity, have developed in a 'piecemeal' way and left gaps in institutional ownership and long-term maintenance
  - Importance of a supporting policy framework, and incentive structures to drive use of the repository
- In White (2021)'s review of evidence maps, all the examples reviewed had been commissioned by the users themselves, who had also been involved in scoping/designing the maps

"Even a cursory look at the literature, shows that evidence-informed policymaking is about more than merely the availability of knowledge items."

Fourie (2018)



### **Lesson 2: Usability matters**

- Repositories need to be designed with users from the start (rather than by researchers alone)
- "Currently, using most knowledge repositories is a laborious and time-consuming task" (Fourie 2018)
- An evaluation of DFID-funded research portals found 'frequent, rapid and impatient' online searches for evidence from policymakers
  - Yet very low usage of the search tools within DfID-funded repositories. Intended users cited Google as more efficient and effective than the portals' own internal search functions (Phillipson et al., 2016)

- A systematic review on evidence use by Langer et al (2016) recommended that better use of information design principles could improve how repositories support evidence use
- Repositories are often global yet policymakers locally are often incentivised or mandated by law to consult local official sources. The preferred sources of information for searching and compiling scientific evidence by decision-makers are official sources, followed by multilateral organisations, academic entities, and research centres, among others, that are close to or known by the users (comment by Mendizabal)



### User engagement (not just at the beginning)

"There needs to be more attention paid to interoperability— meaning how are we going to make sure that the stuff that we put in our repository can be found and used by others?"

Suleman (2019)

"(Evidence gap) maps are a proven way of getting evidence into use but researchers must never fall into the trap of thinking that supplying a research product alone is sufficient to ensure its use.

User engagement in production of the map helps, but once the final evidence-based product is available, communication and other forms of stakeholder engagement are usually required to support uptake."

White (2021)

### Lesson 3: Trust and credibility

- Trusted sources are paramount in helping 'timepoor' policy actors to assess the credibility of research found on the internet.
  - Despite government support, the What Works Clearinghouse is facing criticism for misleading conclusions of reviews. This is eroding its credibility as the source of reviews of what works and what doesn't in education interventions. (Stockard, 2012)

#### Tip

#### **Build trust and credibility**

Use testimonials, endorsements, or user reviews to demonstrate the repository's credibility and value to policymakers.



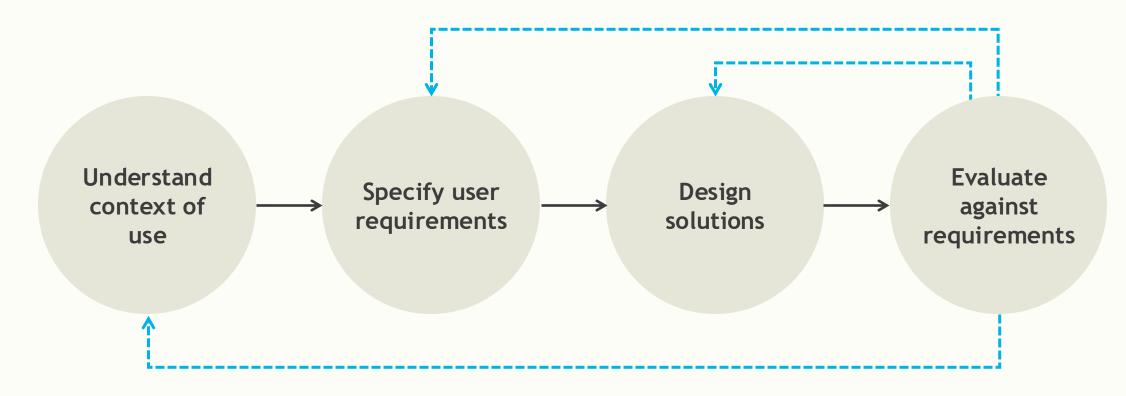
### Lesson 4: Resources: human & financial

- In their systematic review of approaches to strengthening capacity for evidence use, Langer et al. (2016) found that repositories can work to increase evidence use only when combined with efforts to strengthen decision-makers' opportunity and motivation to do so
- Suleman (2019) recommended a 'minimalist' approach to developing repositories in lowresource environments and a 'reduction in dependencies, especially on network and data storage'

- Although a locally-hosted repository solution grants enhance flexibility and control, it comes with higher resource requirements. Scalability isn't as straightforward, necessitating a predetermined allocation of budget for physical storage and maintenance. (Suleman, 2019)
- Additionally, dedicated personnel must be assigned to uphold data security, ensure regular backups, and provide troubleshooting support to users (Philipson et al, 2016)



### Lesson 5: Always get feedback!



User-centered design is an iterative process that focuses on an understanding of the users and their context in all stages of design and development.



### Further questions to consider when designing a repository

- Team capacities to implement & maintain repository (including IT capacity)
- Data protection regulations for storing pdfs
- Access to pdfs behind paywalls
- Are there other repositories already in existence in this context?
  - How do they work? Any lessons learned?
  - For those run by universities: how could policymaker users better make use of these?
- Budget-including not only for setup but also to maintain/update it
- Where will it be hosted?
- How will you ensure constant feedback on usability?
- How will users know about it?



# Resources

### Further reading

- Apolitical (2018). Blog: <u>From research labs to data training</u>, <u>here's how to bring evidence into policy</u>
- Centre for Education Policy Research, Harvard University (2023). Blog: <u>Clearing up the Clearinghouse: Making "what</u> works" more comprehensive and accessible
- Fourie, 2018. <u>Blog: On African knowledge repositories and evidence-informed policymaking</u>. Africa Evidence Network
- Langer, L., Tripney, J. & Gough, D. (2016). The Science of Using Science: Researching the Use of Research Evidence in Decision-Making. EPPI Centre, Social Science Research Unit, UCL Institute of Education, University College London.
- INASP (2015). Online Sources of Evidence for Policy <u>Researchers in Africa</u> Oxford. International Network for the Availability of Scientific Publications (INASP)
- Phillipson, R., Brown, C., Sharp, H., Botchie, D., Bromley, J.M., Weigh, N. (2016). <u>Evaluation of DFID Online Research</u> <u>Portals and Repositories. Volume I: Final Evaluation Report.</u>

- London: Mott MacDonald
- Suleman (2019). Reflections on Design Principles for a Digital Repository in a Low Resource Environment. <a href="https://pubs.cs.uct.ac.za/id/eprint/1331/1/ho">https://pubs.cs.uct.ac.za/id/eprint/1331/1/ho</a> 2019 lowreso urce.pdf
- Trotter, Kell, Willmers, Gray and King (2014). <u>Seeking impact and visibility: scholarly communication in Africa</u>. University of Cape Town and IDRC.
- White, H. (2021) <u>The Strategic Use of Evidence and Gap Maps to Build the Evidence Architecture. CEDIL Methods Working Paper 5</u>. London and Oxford: Centre of Excellence for Development Impact and Learning (CEDIL).
- Wadhwa, M., Zheng, J., & Cook, T. D. (2024). How Consistent Are Meanings of "Evidence-Based"? <u>A Comparative Review of</u> 12 Clearinghouses that Rate the Effectiveness of Educational Programs. Review of Educational Research, 94(1), 3-32.



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