

Library user experience

Removing barriers in the search for knowledge

February 2023



Contents

Contents	2
Foreword	3
Welcome to this summary of the findings from our library user experience study.	3
Introduction	4
Methodology	4
Challenges	6
Global comparisons and trends	8
Key themes	11
Areas for improvement	12
Finding and accessing all relevant resources	12
Identifying and evaluating quality resources	14
Organizing, integrating and citing resources	14
What's next?	16
Recommendations	17
Find out more	18

Foreword

Welcome to this summary of the findings from our library user experience study.

We kicked this project off in 2021, when we commissioned consultancy firm Digirati to talk in depth to academic library users across the globe. We wanted to understand the challenges they face when they search for resources online, how they manage these and what it means for their work when they have to compromise.

OpenAthens provides technology-based solutions that make access to digital resources quick and seamless. We usually sit apart from conversations with library users so we wanted this opportunity to connect with them, check on their experiences and look at their workflows to see how we can improve existing services or develop new ones that support people to do their best work.

We discovered that, no matter where you are, it's still not always easy to find and access what you need. Sometimes the problems are institutional – perhaps the library portal is clunky, or over-stretched budgets mean that journal subscriptions are unaffordable. Sometimes they are caused by weak infrastructure in the researcher's location. Inadequate utilities and poor connectivity were often cited as difficulties. And all too often digital inequalities mean people are working on their phone because that's their only option.

I would like to thank Digirati for capturing the voices of our service users and for uncovering their aspirations and frustrations. I hope this brief report will spark fresh ideas for everyone who is interested in the research journey and lead to solutions that make the journey easier and more equitable. If the problems are universal perhaps the solutions are, too. I urge everyone working in the research value chain to keep that in mind and consider how, when they resolve an issue at local level, that solution could be put to work more widely.

Here at OpenAthens the study has focused our development efforts. We are working on our [MyAthens](#) information portal, aiming to ensure that library users can have the same quick, easy access to the resources they need regardless of where they are in the world.



Jon Bentley
Commercial director

A handwritten signature in black ink that reads "Jon Bentley". The signature is written in a cursive, flowing style.

Introduction

In the last few years library staff have been tested like never before as they adapted library services to support learners and researchers working remotely and online. Learners and researchers have also had to adapt fast to keep their work on track.

OpenAthens asked Digirati to carry out a qualitative research study with library end users to give us a better understanding of their motivations and workflows when doing online research.

Methodology

In early 2021 Digirati carried out semi-structured Zoom interviews with:

- Researchers with and without support (15 total)
- Learners with and without support (9 total)
 - in Nigeria, The Philippines, Malaysia, India, Australia and the US.

They explored:

What do the interviewees want to do?

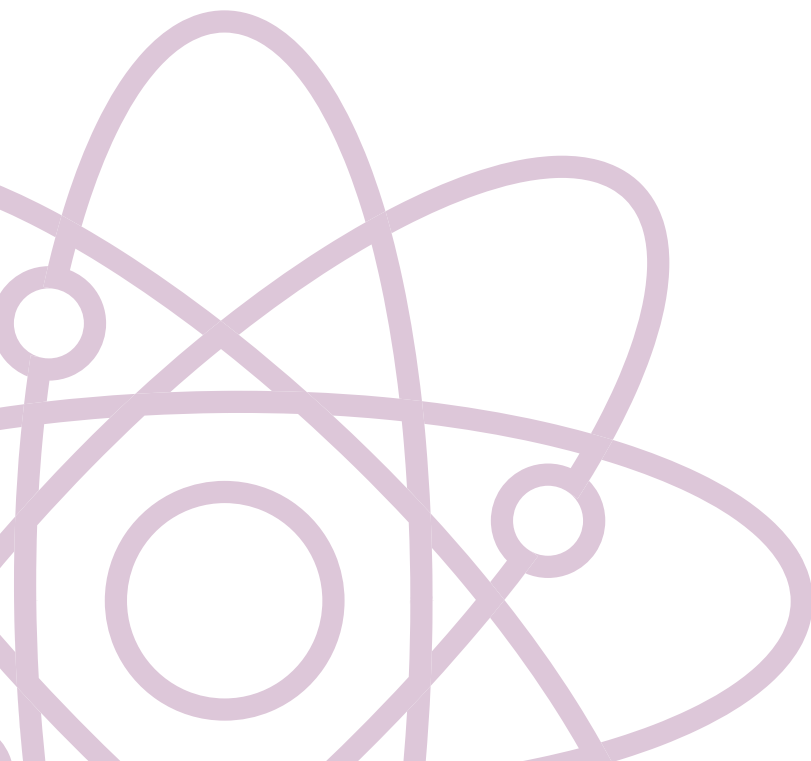
Researchers want to produce and publish work that adds to human knowledge. They want to have a positive impact in the world, achieve personal satisfaction and make progress in their careers.

Learners want to demonstrate an understanding of specific areas of human knowledge so they can do well in their degrees, achieve personal satisfaction, make their families proud and improve their future study and employment prospects.

They also probed:

Are there obstacles holding interviewees back from doing their best work?

Ultimately, we wanted to understand what can be done to remove any barriers and help learners and researchers to do great things.





**Researchers want to
produce and publish
work that adds to
human knowledge**

Challenges

The researchers and learners in Digirati's study face a multitude of challenges when looking for resources, and especially journal articles, online. Many of these challenges are common and widespread, but their severity varies from person to person depending on factors that include geographical location, the availability of quality support and career stage.

Lack of access

Interviewees value journal articles highly, but said their access to them is hindered by factors that include:

- Paywalls
- Lack of guidance on how and where to search
- Unreliable internet and/or power supplies

"...the unfortunate monetization of research behind paywalls"

Researcher, Philippines

"Our school never recommends journals to us. They will just say 'go online and get stuff'"

Learner, Nigeria

"[internet] outages are common in crowded suburbs. I think we are pretty backward"

Researcher, Australia

Students and researchers who can't get quick, easy access to online resources can't do their best work or achieve their potential.

Cost of access

Access to journal articles frequently comes at a cost. Most students and researchers need journal articles to be free at the point of use and they believe this is an ethical issue as well as a practical one.

"Research is not about commercialization, it's about creating and enhancing knowledge"

Researcher, Australia

Only students and researchers with the best financial support can routinely pay for articles. Even those who can pay are slowed down by the need to justify the cost. Sometimes, they are also frustrated about paying for something that looked promising from the abstract but proved not to be, after purchase.

"Most research materials are paid [for] and some titles take much of my time before knowing if it is actually useful for my research"

Learner, Philippines

There are growing expectations that publicly funded research should be accessible to all. For example, in early 2021 the Organisation for Economic Co-operation and Development (OECD), which has 38 member countries, revised and updated its **Recommendation on Access to Research Data from Public Funding** to specify that the metadata, bespoke algorithms, workflows etc that are necessary to interpret research data should be open access, as well as the data itself.

- In the UK, UKRI **introduced a new open access policy** on 1 April 2022, intended to ensure full and immediate access on publication to all the research outputs from its grants
- The Australian Government has made a **commitment to open access, open data and intellectual property management**. Governmental research funders each have open access policies that align with this
- And in North America there have been repeated attempts to enact bills that would ensure taxpayer-funded research is **never hidden behind a paywall**. On 26 May 2022 The White House issued its **new guidance to ensure federally funded research data equitably benefits all of America**

Publishers are increasingly responding to these expectations by adopting new content delivery models such as hybrid open access/subscribed content.

Difficulty of access

Often, learners and researchers don't know where to find resources. They say there's too much available and it is too widely dispersed across the internet. The institutional library might seem the obvious first port of call, but for many it is not, either in person or remotely. In these cases, learners and researchers don't make use of the curated, high-quality resources that their library subscribes to. Instead, they may devise their own, sub-optimal search methods.

"I have institutional access to many databases, but it is usually a hassle to go through the University's VPN. Sci-Hub+Doi is such an easy shortcut!"

Researcher, North America

Research gaps

Researchers worry about not being able to identify research gaps because resources are hard to discover or access. This is always detrimental and can be disastrous. A master's candidate from Nigeria, with limited access to online resources, wrote a research paper only to find when he tried to publish that the research had been done a decade before. He is still trying to tweak his work to get it published.

Now in Malaysia working on his PhD he said, *"research here is easier. You get to be abreast of the latest information so you can think better"*.

Evaluation of resources

But it's not enough to make all resources open access. Users still need help to spot quality and assess relevance even when they are well established in their academic careers.

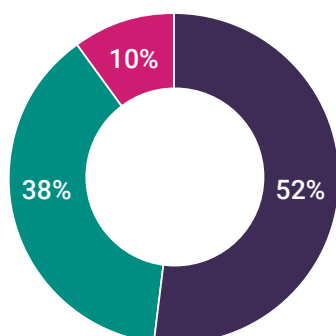
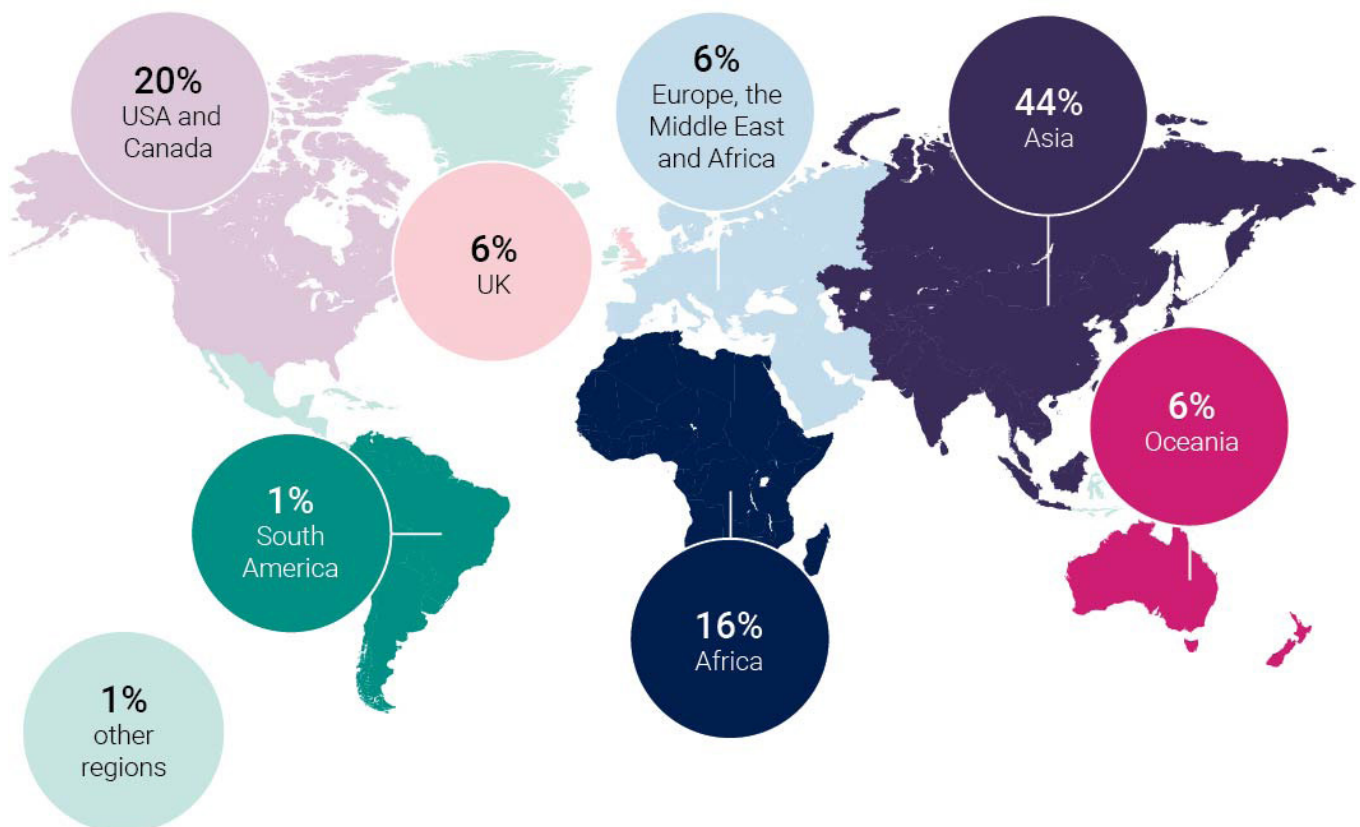
This can come in the form of guidance and training in research skills, as well as in use of platforms and tools.

Global comparisons and trends

Between September and December 2021, using Jisc's [online surveys](#) platform, we followed up on Digirati's qualitative research with a quantitative study looking at the issues that most commonly have a negative impact on researchers and learners.

These findings, together with Digirati's research, are helping us prioritize future developments.

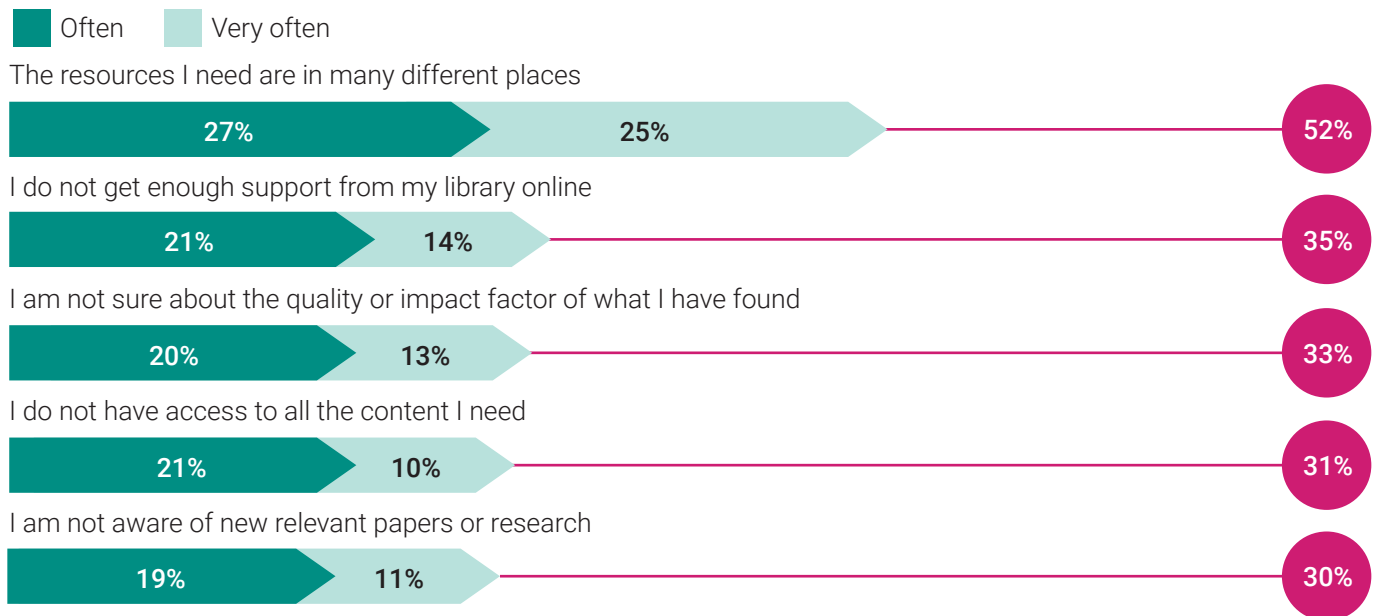
Using social media and direct email we recruited 174 respondents across the globe:



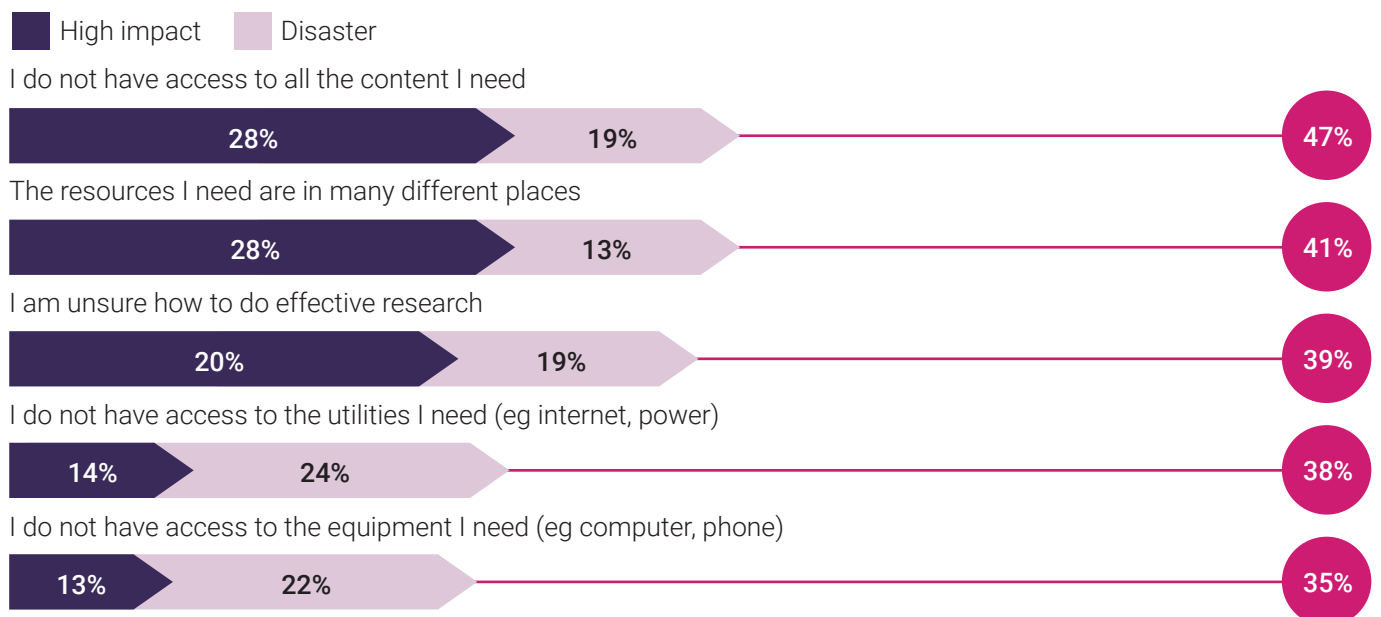
The majority were students (52%) or researchers (38%). The remaining 10% included a teacher, humanitarian, geologist, 'employee' and a librarian.

We asked them to list the issues they face when researching online.

Their five most frequently experienced issues



The five issues with the biggest negative impact on their work

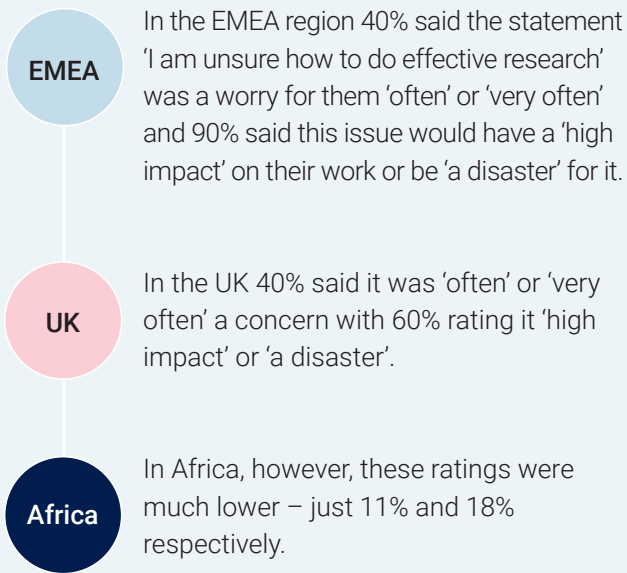


Different responder groups experience these challenges to different degrees

For example, with more experience under their belts, the **researchers** we spoke to are less concerned than students about their research abilities. But they share students' worries about how to discover and access content and they are very concerned about the negative impact on their work if they miss key resources.

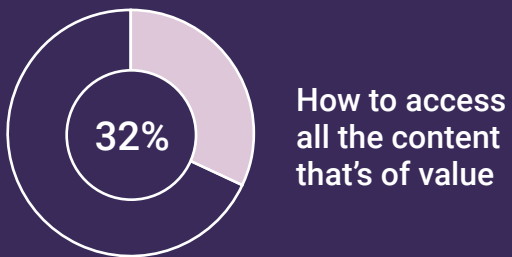
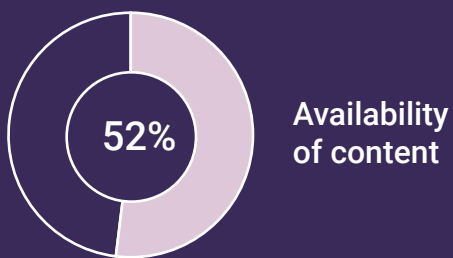
Students said they are particularly concerned about how to evaluate the quality of resources they find online and about how to organize those resources.

Geography also affects the severity of these challenges.



At OpenAthens, we'd like to know more about the reasons for the different response rates. For example, have respondents in EMEA countries and the UK given research skills a high priority because they are a hot topic in the academic communities here? In Africa, does the lower priority suggest that learners and researchers have more pressing concerns, such as access to hardware or robust connectivity?

Students and researchers said they are worried about:



Crucially:



Our researchers and learners all recognize that content is fundamental for their work. There are marked differences, however, in how they rated the impact of missing out on valuable resources.

Our study involved quite small numbers of respondents, particularly in the EMEA region and South America. It would be useful to explore these differences further, with a larger cohort.

Learners and researchers need support from their academic libraries.

Insufficient library support is frequently cited in our study as an issue, most markedly in Africa, Asia, and Europe, where respondents also said it has a significant impact on their ability to do good work.

Follow-up interviews would unlock valuable information about the kinds of support these learners and researchers need – and how best to provide it.

Key themes

From the responses to these two research studies we have identified five main themes. These are the key areas in which OpenAthens aims to improve the online research experience for academics. We want them to have the tools and support they need to do their best work, achieve their potential and make their full contribution to society. We are looking for ways to democratize knowledge, dismantle digital divides and give equal opportunities to learners and researchers so they can succeed in their studies, their work post-study and their lives.

Researchers and learners want to:

- **Find** all relevant resources relating to their research queries
- **Access** all relevant resources relating to their research queries
- **Identify** reputable journals – both for finding resources and (for researchers) for publishing their work
- **Organize** these resources
- **Integrate** and cite the resources in their work



Areas for improvement

Finding and accessing all relevant resources

The role of the library

Academic libraries – and their librarians – have been under extreme pressure but their response to lockdowns has been incredible. They have digitized resources, implemented digital tools and devised click and collect schemes for library users.

However, recent research, including the [Librarian Futures report by Lean Library](#), shows that the majority of researchers and students now begin their discovery process outside the library. Comments from our qualitative research show that digital is often the preferred choice for students and researchers when they look for resources, and they often circumvent the library because they think there are faster, easier ways of getting what they need.

“There’s no real point in me going to the library in person. I don’t think I’ve ever looked at a paper resource” **Researcher, Australia**

“I tried to use my university website but it was not easy. Confusing. Now, I just use Google Scholar” **Researcher, United States**

A researcher in Australia said their first port of call for an abstract or a casual search would be Google Scholar. Only if that doesn’t bring up suitable content, or if it doesn’t offer access to a full article, do they resort to the university library’s website.

When students and researchers do turn to the library, often because they want access to a journal that’s behind a paywall, their experiences vary greatly. Some find a wealth of support while others find they wait several days for a response, or sometimes never get one at all.

Complicated search processes

Our study shows that students and researchers are finding their own online search efforts frustrated by:

- **Resources that are scattered across the internet**

They told us that having no central source of information about what resources are available makes it impossible to be sure if what you are looking for exists. It makes it hard to see if they have found all the information they need, or what is left to do.

“Everything being scattered across the internet, in libraries, it’s hard to gauge if you are halfway through” **Learner, Philippines**

- **Resources that are hidden behind a paywall**

Many researchers and students object on both practical and ethical grounds to paywalls. Those without the means to pay, and whose libraries don’t have journal subscriptions, are disadvantaged and this has profound implications.

A learner in Malaysia said that if they can’t find the resources they need for free they modify their assignment to suit whatever they can find. Several other respondents say they resort to pirated copies of articles, for example on the illegal website Sci-Hub. With deadlines to meet and bills to pay, they use whatever they can get their hands on even if it is likely to be of lower quality.

- **Clunky, hard to navigate library portals**

We heard that clunky portals cause frustration and waste time:

“I’m not inclined to do that [ie use the library portal]. The website is very complex compared to Googling something” **Learner, Philippines**



Comments from our qualitative research show that digital is often the preferred choice for students and researchers when they look for resources

Whatever discourages users from curated sources encourages the use of untrustworthy ones.

Unreliable utilities

As we've seen, online is the preferred search option for most students and researchers, and many classes are online, too. However, poor connectivity and unreliable utilities can hold students and researchers back.

"As we're speaking, we have no light" **Researcher, Nigeria**

"Reliable internet is absolutely essential. If I can't connect to the internet I can do nothing" **Researcher, Australia**

Identifying and evaluating quality resources

Researchers and students want to use quality resources. Students, especially, need guidance and training in how to evaluate the resources they find, although not all receive it.

"When I started I had to complete a workshop series on how to find your topic, where to find good sources, how to structure literature research online...it was new to me, I didn't know how to do proper citations...in my degree [in Europe] we only learned the actual engineering" (Researcher, Australia)

Those who don't have funds to pay for articles that are behind a paywall and can't access them via the library, friends or study groups, are in particular need of help to evaluate journals before they pay up. Additionally, researchers need support to identify the best journals in which to publish their own work.

Open access isn't the solution to this issue. If all journal articles were published in open access there would, arguably, be even greater need for students and researchers to receive training and tools to help them evaluate online resources.

When support isn't readily available, researchers and students resort to a variety of methods to check the value of the resources they find. These include checking the credibility of the database, looking at the article's ranking for impact and conducting Google searches. Others said they look to see if it is in the library, and if it's there they consider it safe, which is a mark of the trust they implicitly have in their libraries. A few simply take a pragmatic approach. As one put it *"I can't be picky"*.

Organizing, integrating and citing resources

Existing clunky processes make it hard for respondents to file and arrange their journal articles and managing this interferes with their thinking and writing.

It is a significant problem. Online research becomes almost addictive, and students and researchers accumulate vast amounts of information simply because a lot of it is reasonably readily available.

"I think online search is a beautiful journey. Compared to when I was studying, those days, you know, [were] so difficult" (Researcher, Malaysia)

"When I've finished my paper I'll still go and read another article. In the end you cannot stop using it [the internet]" **Researcher, Philippines**

Numerous interviewees said they need smoother processes to store, retrieve and use articles they've accumulated:

"It's a lot of work arranging the PDFs. If there was another way that could make it easy..." **Researcher, Philippines**

"It's arduous re-naming files every single time" **Learner, Malaysia**










Numerous interviewees said they need smoother processes to store, retrieve and use articles they've accumulated









What's next?

Our two studies have helped us create wish lists for researchers and students.

Researchers' wish list

-  A high-quality library portal and effective library support
-  Access to case studies local to their country/region
-  An easy way to organize online research and identify what they've read
-  An easy way to insert citations into work, in the appropriate formats
-  A seamless workflow from finding resources to using them
-  Clear understanding of each journal's academic reputation
-  Additionally, **researchers who have with little support** need free access to resources and affordable access to reliable wifi

Students' wish list

-  A high-quality library portal and effective library support
-  Access to all appropriate, relevant resources for their coursework
-  A central place to find and access research
-  An easy way to insert citations into work, in the appropriate formats
-  A seamless workflow from finding resources to using them
-  Guidance on different types of resources
-  Access to case studies local to their country/region
-  Additionally, **students who have little support** need free access to resources, affordable access to reliable wifi, and a device with a sizable screen and reasonable storage so they need not work on their phones

Recommendations

As we've seen, learners and researchers need to:

- **Find** all relevant resources relating to their research queries
- **Access** all relevant resources relating to their research queries
- **Identify** reputable journals – both for finding resources and (for researchers) for publishing their work
- **Organize** these resources
- **Integrate and cite** these resources in their work

Recently redeveloped, our MyAthens library portal is a user-friendly way for end users to find and access their library's subscriptions. Its integration with discovery services such as EBSCO Discovery Service (EDS), Google Scholar and CORE makes it a useful starting point for any research journey. Recent service developments address some of the concerns expressed in this study.

However, our study shows that more can be done by the sector to meet library end users' needs by developing joined-up workflows.

Recommendations for libraries

- Work with the vendors of your discovery service or library catalogue to implement intuitive, simple search functionality and give service users a seamless user experience
- Provide robust library support and training and ensure that librarians work collaboratively with university departments so they become an integral part of the student and researcher workflow
- Streamline online searches and safeguard users' anonymity via federated single sign-on

Recommendations for providers

- Implement federated single sign-on to give users smoother, safer access to your content which improves user experience, increases usage and supports customer retention. It also provides you with accurate information about anonymised users accessing your platform, how often and what they are reading
- Work with your library customers to integrate your products seamlessly into their discovery systems
- Provide tools that enable personalized journeys and support storage, retrieval and citation

Recommendations for governments and network providers

Underpinning all this activity is the issue of access to utilities and to digital technologies. A significant number of respondents in our studies were disadvantaged by unreliable power supplies and/or shaky internet connectivity. Some were also having to work on their phones because they didn't have access to laptops or desktops. Radical approaches are needed to give disadvantaged students and researchers access to infrastructure, equipment and tools that help them reach their potential.

- Invest in improved connectivity in under-served areas. Some encouraging work is already being done. For example, GÉANT, which delivers the pan-European network underpinning research and education, is [investing in international connectivity](#) in Africa, Latin America and the Eastern Mediterranean
- Explore green energy projects – including solar, wave and wind power installations – that would stabilize power supplies and make them more affordable.

Find out more



Librarians

Find out about the new, improved **MyAthens** library portal

Watch our **librarian learning webinars**

Read Jisc's detailed guide to **making your digital collections easier to discover**, and its quick guide to **supporting the evaluation and review of collections**

Take a look at our **advice on getting a better UX from publishers**



Resource providers

Read about the **three main user journeys**, then watch the full **webinar** for more information about how to give users a high-quality user experience on your website

If that gets you thinking more about UX, read more on how talking to users can inform **design decisions that enhance user experience**

Take a look at our **user experience recommendations for improved access to content**

Pick up **five tips to improve online research experience**

Watch our **provider webinars**



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