Grit

Tools & Resources for the GRIT Project

A ResearchComp-Aligned Guide

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— A ResearchComp-Aligned Reference Guide —

Why this guide?

Conducting high-quality research today requires more than just good ideas—it also relies on the smart use of digital tools that support every stage of the research process. To help researchers, especially those engaging with the GRIT game experience, we've compiled a selection of recommended tools. These are aligned with the **ResearchComp Framework**, which defines seven key competence areas for researchers working across disciplines.

Each tool included in this resource:

- Helps you perform a specific research-related task more effectively
- Has been reviewed and selected for its accessibility, relevance, and ease of use
- Comes with a short explanation of what it does and why it matters

You can use this guide:

- As a practical support document while engaging with the GRIT game or the Telegram bot
- As a reference at different stages of your academic journey
- To explore new tools that improve how you manage, communicate, and organise your research

This guide is designed not only as a standalone support document but also as an integrated companion to the GRIT game and Telegram bot. By aligning digital tools with narrative-driven mini-missions, we encourage players and researchers alike to reflect on how competences translate into action. The examples in each section illustrate how these tools can solve real research dilemmas—just like those faced by our fictional GRIT agents.

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1 · Managing Research Tools

Using digital platforms and software to organise your literature, manage your data, and support transparent research workflows. Reference managers and open repositories are the backbone of transparent scholarship. They help you collect literature systematically, generate citations accurately, and share data in line with FAIR principles. Getting comfortable with one (or more) of these platforms early in a project prevents duplication, streamlines collaboration, and satisfies funder or journal open-science requirements.

Tool	What it does and why it matters	Link
Zotero	Zotero is a free, open-source reference manager that helps you collect, organise, and cite research sources. It works as a browser extension and connects to Word or LibreOffice, making it easier to manage bibliographies and generate citations in the correct format. Ideal for students, early-career researchers, and interdisciplinary projects.	zotero.org
Mendeley	Mendeley is a free reference manager and academic social network. It allows you to save and annotate PDFs, sync your library across devices, and collaborate with colleagues through shared folders. It's especially useful for researchers working in teams or across institutions.	mendeley.com
EndNote	EndNote is a professional-grade reference management tool, often used in institutions that require complex citation styles or access to the Web of Science database. It helps organise large libraries of references and offers advanced formatting and de-duplication features.	endnote.com
Zenodo	Zenodo is a trusted open-access repository developed by CERN. It lets you upload and share datasets, code, publications, or other research materials—and gives you a permanent DOI for each item. A great tool for open science and meeting funder requirements for data sharing.	zenodo.org

Open Science Framework (OSF)	OSF is a free platform that helps you manage your entire research project—from planning and data collection to sharing final results. You can preregister studies, store data, and invite collaborators, all in one place. It supports transparency and good research practices.	osf.io
FigShare	FigShare is a platform where researchers can upload, store, and share figures, datasets, presentations, and other outputs. It assigns DOIs and tracks engagement, making it useful for sharing work that may not be published in traditional formats.	figshare.com

GRIT Mini-Mission: *"The Literature Avalanche"*

Scenario: *Detective-researcher Lina enters Dr Gray's archive and finds a torrent of 450 PubMed hits on antibiotic resistance.*

• She launches **Zotero** to vacuum every abstract straight from her browser, tagging entries by inclusion criteria.
• After full-text screening, only 112 papers survive; Zotero's smart folders let her generate an exclusion log in seconds for her supervisor.
• When the review is complete, the team deposits their data-extraction sheet in **Zenodo**, grabs the DOI, and cites it in the Methods section—locking in transparency (and bonus GRIT points).

2. Doing Research

Tools that support the process of planning, conducting, and documenting your research—from data collection to version control and collaborative writing. Good ideas alone are rarely enough: today's projects require structured planning, reproducible workflows, and disciplined version control. The tools below help you capture ideas early, turn them into code or text, and keep every step transparent—from your first notebook entry to the final dataset.

Tool	What it does and why it matters	Link
Notion	Notion is a flexible digital workspace that helps researchers structure their ideas, tasks, reading	notion.so

	lists, and project timelines in one place. Its customisable pages and databases make it useful for planning research workflows, managing field notes, or even designing literature reviews.	
Obsidian	Obsidian is a note-taking app designed for knowledge management. It uses plain-text Markdown files and allows you to build a "second brain" through linked thinking. Many researchers use it for research diaries, conceptual maps, or theory development.	obsidian.md
Overleaf	Overleaf is a collaborative online LaTeX editor for writing academic papers, theses, and technical reports. It's especially useful for disciplines where precise formatting and mathematical typesetting are required. Enables real-time editing and version control.	overleaf.com
Jupyter Notebooks	Jupyter is an open-source tool widely used for data science, computational research, and reproducible workflows. It allows you to mix code, outputs, and text in one document—ideal for data analysis, modelling, and transparency.	jupyter.org
GitHub	GitHub is a version control and collaboration platform for code and data. Researchers can store their scripts, collaborate with co-authors, track changes, and make their work openly accessible. Particularly useful for computational research, but increasingly relevant across fields.	github.com
Trello	Trello is a project management tool based on the Kanban system. It can be used by research teams to track tasks, deadlines, and project progress using boards and cards. Helpful for collaborative research, lab teams, or PhD supervisors coordinating multiple projects.	trello.com
DMPonline	DMPonline helps you create data management plans that comply with institutional or funder requirements (e.g. Horizon Europe). It guides you	dmponline.dcc.ac.uk

	through the steps of describing how you will collect, store, and share data in your project.	

GRIT Mini-Mission: *"The Protocol Puzzle"*

Scenario: *In Dr Gray's deserted main lab, you uncover half-finished protocols and a corrupted dataset.*

- You open **Notion** to build a clean protocol template and checklist—immediately shareable with collaborators.
- Code snippets go in a **Jupyter Notebook**; you push it to **GitHub** so every bug-fix is tracked.
- A journal asks for a data-management plan—**DMPonline** guides you through funder-compliant answers in minutes.

  Mission accomplished: the project regains momentum (and earns you extra GRIT credits for reproducibility).

3. Interacting with Others

Tools that support collaboration, knowledge exchange, and communication with peers, partners, and the public. Research thrives on conversation—across departments, disciplines, and continents. Robust communication platforms and scholarly networks extend your reach, speed up feedback, and amplify the impact of your findings.

Tool	What it does and why it matters	Link
Slack	Slack is a messaging platform that supports organised discussions across teams and projects. Researchers use it to coordinate remote collaborations, share quick updates, and keep discussions in one searchable place. Channels can be topic-specific or cross-disciplinary.	slack.com
Microsoft Teams	A widely used platform for remote meetings, file sharing, and project management. It integrates well with Office 365 and allows research teams to hold virtual meetings, share documents, and	microsoft.com/en/microsoft-teams

	manage ongoing communication in one hub.	
Zoom	Video conferencing tool used for virtual meetings, interviews, webinars, and international collaborations. Especially important for global research projects or remote fieldwork coordination.	zoom.us
ResearchGate	A social networking site specifically for researchers. It allows you to share publications, ask and answer questions, follow other scholars, and track metrics. It's a good way to increase visibility and foster peer-to-peer dialogue.	researchgate.net
Academia.edu	An online platform for sharing research papers and connecting with fellow academics. Though less structured than ResearchGate, it supports building an online research identity and increasing reach.	academia.edu
ORCID	ORCID provides researchers with a unique digital identifier that distinguishes them from others. It links your research outputs across systems and is now required by most major journals and funders. Essential for visibility, consistency, and credibility.	orcid.org
Google Meet	Lightweight video conferencing integrated into Google Workspace. Useful for one-on-one or team meetings, especially when using Google Docs/Calendar for collaborative scheduling.	meet.google.com

GRIT Mini-Mission: *"The Collaboration Cipher"*

Scenario: *A cryptic message in the Telegram bot hints at a hidden dataset stored abroad.*

- You spin up a **Slack** workspace, inviting partners from Zaragoza, Siena, and Larissa.
- Weekly progress calls run on **Zoom**, with recordings auto-saved to the channel.
- You share a preprint on **ResearchGate** and attach your **ORCID** ID—three new experts volunteer to validate your analysis, cracking the cipher and pushing the project forward.

4. Thinking and Reasoning

Tools that support critical thinking, ethical reflection, argument development, and decision-making in complex research environments. Critical thinking depends on tracing ideas, weighing evidence, and spotting weak links in arguments. The tools below help you map concepts, interrogate citations, and surface hidden patterns—skills at the heart of rigorous inquiry.

Tool	What it does and why it matters	Link
MindMeister	MindMeister is a mind-mapping tool that helps researchers visualise concepts, connections, and hypotheses. Useful for organising literature, designing theoretical frameworks, or brainstorming during proposal writing.	mindmeister.com
Connected Papers	This tool creates a visual graph of academic papers related to a chosen article, helping researchers understand the development of a research topic. It's ideal for identifying conceptual trends and refining your research positioning.	connectedpapers.com
Scite	Scite enhances traditional citation tracking by showing how papers have been cited—supportively, neutrally, or critically. It enables a deeper understanding of the context and quality of citations. Useful for literature review and source evaluation.	scite.ai
Elicit	Elicit is an AI-powered research assistant that helps you find relevant literature, extract key information from articles, and build structured evidence tables. It supports reasoning and	elicit.org

	transparency, especially for systematic reviews and proposal writing.	
Perusall	A collaborative reading platform where researchers can annotate and discuss academic texts together. Supports deep reading, shared reflection, and collective understanding—especially useful for PhD seminars or interdisciplinary teams.	perusall.com
Zotero Tags & Notes	Beyond reference management, Zotero's tagging and note-taking features allow for building structured reflections, argument maps, or thematic categories during literature analysis. Supports reasoning and synthesis processes.	zotero.org

GRIT Mini-Mission: *"The Hypothesis Heist"*

Scenario: *To prove Dr Gray's cure was viable, you must reconstruct the theoretical chain of papers he cited.*

- **Connected Papers** visualises the literature landscape, revealing a forgotten but crucial 2018 study.
- **Scite** shows that half the citations to that study are *disputes*—sparking a deeper methodological review.
- Your team meets inside **Perusall**, annotating PDFs and debating flaws in real time. You emerge with a sharpened hypothesis and enough evidence to reopen the case.

5. Self-Management

Tools that help researchers manage their time, track progress, maintain wellbeing, and stay aligned with long-term goals throughout the research journey. Long projects test endurance. Managing focus, energy, and wellbeing is essential to maintain high-quality output without burnout. The apps below foster productive habits, track progress, and support mental resilience.

Tool	What it does and why it matters	Link
Toggl Track	Toggl is a simple time-tracking tool that helps researchers understand how they spend their	toggl.com/track

	time. It supports reflective practice and can improve work-life balance, especially in independent or remote research contexts.	
RescueTime	RescueTime runs in the background and tracks how you spend time on your computer. It provides analytics and alerts to help you stay focused and reduce distractions—particularly valuable during writing or data analysis phases.	rescuetime.com
Forest	A mobile app that promotes focused work sessions by "growing" a virtual tree for every block of uninterrupted time. It adds a motivational and visual aspect to Pomodoro-style work methods, and also contributes to real-world tree planting.	forestapp.cc
Headspace	A popular app for guided meditation and stress management. Researchers can use it to improve mental focus, reduce anxiety during intense periods (e.g., grant deadlines), and support long-term cognitive health.	headspace.com
Notion (Goal Templates)	Notion isn't just for note-taking; with its template library, you can set personal goals, reflect weekly, and break long-term research objectives into small, trackable tasks. Customisable dashboards support self-leadership.	notion.so
Habitica	A gamified habit-tracking app where users "level up" by completing daily goals and building routines. It brings a playful, rewarding approach to time and task management—particularly helpful for early-career researchers.	habitica.com
OpenDoodles + Gratitude Tools	While not productivity tools per se, using visual prompts (e.g., OpenDoodles) or digital gratitude journals can support creativity, mood regulation, and perspective—essential elements of sustainable research practice.	opendoodles.com

GRIT Mini-Mission: *"The Time-Turner Challenge"*

Scenario: *A countdown timer in the Escape Room gives you four real-world weeks to validate Dr Gray's results.*

- You set up **Toggl Track** to measure how much time each analysis step actually takes.
- **RescueTime** flags unproductive browsing, and **Forest** gamifies focus blocks—each pomodoro grows a digital tree (and plants one IRL).
- On stressful days, a 5-minute **Headspace** session resets concentration, while **Habitica** turns daily goals into XP and virtual armour.
  By project end, your log becomes part of the final methods section, demonstrating transparency and effective self-regulation.

Conclusion

This curated collection of tools has been designed to support researchers at various stages of their journey—from initiating a project and navigating collaboration to managing time and cultivating reflective practice. Grounded in the **ResearchComp framework**, these digital resources were selected not only for their functionality but also for their alignment with key competences expected of today's researchers. By integrating them into the GRIT experience—whether as part of the game, the Telegram bot, or through the website—we aim to enhance accessibility, self-direction, and long-term skill development.
These tools not only enable effective research—they also allow players to embody the GRIT values: resilience, resourcefulness, and collaborative intelligence. The more you use them, the more competent—and confident—you become in both the virtual missions and your real research life. We invite all users to explore these tools, adapt them to their own contexts, and share feedback as we continue refining the ecosystem of support around GRIT.

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Find out more on: www.gritproject.eu

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