

THE YOUNG ACADEMY



IN CONTROL

A MANIFESTO FOR A RESPONSIBLE
DIGITAL FUTURE IN HIGHER EDUCATION





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IN CONTROL

A MANIFESTO FOR A RESPONSIBLE DIGITAL FUTURE IN HIGHER EDUCATION

The Young Academy
June 2025

SUMMARY

This manifesto is a call to action to institutions of higher education for more thoughtful, responsible digitalization of higher education. It outlines the core values that are under threat and offers recommendations for change and best practices.

1. Current situation and risk: Core values under threat

Every Dutch higher education institution has a mission statement outlining its core values, with significant overlap between these institutions. These core values include autonomy, responsibility and academic and educational freedom. We fear that unchecked or unchallenged adoption of current digital technologies may threaten these values, as universities and other institutions of higher education are increasingly outsourcing the core technological systems that support their essential functions.

The core functions that support research and education include tools that influence how researchers and educators collaborate, value each other's work and how students learn. While some of these technological 'solutions' are useful, they are not neutral.

2. Recommendations

We call upon higher education institutions to, among others:

- Develop a comprehensive vision on their core values and foster discussion about them.
- Recognise that core values must be considered in technological solutions.
- Collaborate with other institutions to avoid being played off against one another.
- Be transparent and accountable regarding the software portfolio.
- Establish clear guidelines for software procurement.

We call upon staff and students to get involved by:

- Raising awareness about these issues and their ethical implications.
- Actively approaching your institution's leadership about technology decisions.
- Educating yourself about how public money is being spent at your institution.
- Using and advocating for open-source solutions whenever possible.

3. Approach and practical solutions

The Young Academy calls upon higher education institutions and policymakers to critically assess procurement criteria. Open-source solutions and providers sharing core academic values should be preferred. Finally, higher education institutions should be transparent in their decisions.

We call upon higher education institutions to invest in in-house expertise, to foster and support spin-off initiatives to ensure that solutions are developed for and by the community and to support and invest in Dutch and international initiatives that create or re-use solutions for the educational community.

We must all lead by example, prioritise open-source, community-driven services and critically assess our institution's choices on technological solutions and hold our institutions accountable.

BACKGROUND

Technology is increasingly shaping every aspect of higher education, from research and teaching to administration and beyond. Decisions surrounding the use of technological solutions often overlook the fundamental – value-related – questions at stake, however. Most institutions of higher education approach decisions concerning digital infrastructure from an administrative perspective. For example, in an effort to create digital learning environments, design research data infrastructure, and develop platforms to make publications and academic output accessible, administrators make agreements with external commercial tech companies. Their decision-making typically considers the financial and logistical aspects, similar to buying furniture or office supplies, but it falls short when it comes to addressing the consequences for governance and the ethical implications, thereby creating dependencies that undermine the very essence of our profession. The academic community is slowly losing control over its own means of communication, and we need a fundamental change in direction. The Young Academy is therefore calling for a meaningful conversation about the values that should guide the adoption of digital tools in higher education.

This manifesto is a call to action to institutions of higher education for a more thoughtful, responsible approach to the datafication of higher education. We begin in the first section by outlining the core values that underpin higher education. These values should guide decisions on the digital infrastructure of academic work and collaboration with technology providers. In the second section we make recommendations for change. The third and final section offers best practices, highlighting practicable and actionable steps to begin implementing change.

1. CORE VALUES UNDER THREAT

Every Dutch higher education institution has a mission statement outlining its core values – the principles that define and shape its very identity. While mission statements may differ from one institution to the next, there is significant overlap between the core values they uphold. They include autonomy, responsibility, academic and educational freedom, inclusivity, diversity, sustainability and societal impact. We fear that the unchecked or unchallenged adoption of current digital technologies form a threat to these core academic values, as universities and other institutions of higher education are increasingly outsourcing the core technological systems that support their essential functions.

Research

In research, the core functions mentioned above include administrative tools such as current research information systems ('CRIS'), which track researcher output (published articles) and their funding and collaborations and maintain repositories for collecting, storing and sharing data, software (computer code) and publications. These core functions, the technological 'solutions', are not neutral: they shape what researchers read, with whom they collaborate, and where and how they share data, code or other resources. They influence how researchers describe themselves and make career choices. By nudging, advising and benchmarking individual researchers, as well as research groups and institutional departments, these systems often clash with initiatives like Recognition and Rewards (R&R)¹, the San Francisco Declaration on Research Assessment (DORA)² and Open Science.³

Inherently political decisions about what is prioritised (such as the number of publications, citations and large grants) and what is undervalued by institutions (such as government advisory work, outreach activities shaping the regions we live in, patient relations, open-source software development, community work, etc.) are currently being

1 A [national initiative](#) that aims to improve the ways in which researchers and the outputs of scholarly research are evaluated.

2 An international research assessment initiative with aims similar to R&R.

3 The international movement to make scientific research and its results accessible to all levels of society.

determined by what is easy to measure by the digital infrastructures in place (such as h-indices). However, these decisions should be made independently by the academic community. Decisions regarding priorities and benchmarking should not be influenced by the ease for a technological system to record, and therefore highlight, certain forms of output. Moreover, it is often not clear whether and, if so, how much such 'benchmarks' impact critical decisions about academics, such as promotions or grant approvals.

The problems described above leads The Young Academy to conclude that the autonomy of researchers is at stake. The current technological platforms undermine the autonomy of their work and the work of departments and funding bodies by shifting fundamental choices about how to serve public values away from academics and into the hands of these infrastructures, which are dominated by non-academic actors. The core systems that track and influence research are often run by for-profit publishers and big tech companies.⁴

First of all, these services often track and collect personal and other data in ways that are at least problematic under the GDPR.⁵ It is virtually impossible to check whether data are being collected and where they are stored. Recent advances in generative AI and Large Language Models (LLMs) have made it even more difficult to track this, as it is often unclear which data are being used to train these models and how they are being trained.

Second, outsourcing the development and operation of such key software endangers both the individual's autonomy, as described above, and the autonomy of entire institutions. Higher education institutions are dependent – and are bound to become even more so – on the commercial companies that run their core facilities, leaving universities very little room to negotiate. One of the main reasons for this is that they end up firing the experts that could have judged the technical parts of the negotiations. After outsourcing their core functions, the institutions lose the expertise to judge what the infrastructure is doing (because the departments concerned are being closed and staff with this knowledge

4 Such as Elsevier (ScienceDirect, Scopus, Pure, Mendeley), Clarivate (Web of Science, ResearcherID, publons, Incites), Springer Nature (Insights, Springerlink, Scigraph, Overleaf, Elements), Wiley, Microsoft, Amazon and Google

5 * Eiko, F. (2022, May 9). Welcome to Hotel Elsevier: You can check-out any time you like ... not. *Eiko Fried*. <https://eiko-fried.com/welcome-to-hotel-elsevier-you-can-check-out-any-time-you-like-not/>

* DFG-Committee on Scientific Library Services and Information. (2021). *Data tracking in research: Aggregation and use or sale of usage data by academic publishers. A briefing paper of the Committee on Scientific Library Services and Information Systems of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)*. Zenodo. <https://doi.org/10.5281/zenodo.5937995>

* Siems, R. (2021). *When your journal reads you – user tracking on science publisher platforms*. <https://doi.org/10.5281/zenodo.4683778>

* *European Commission's use of Microsoft 365 infringes data protection law for EU institutions and bodies | European Data Protection Supervisor*. (2024, September 12). <https://www.edps.europa.eu/press-publications/press-news/press-releases/2024/european-commissions-use-microsoft-365-infringes-data-protection-law-eu-institutions-and-bodies>

is no longer available) and are therefore unable to step in if needed. Again, advances in generative AI may make it even more difficult to determine whether, how, when and which decisions are being made and by whom.

Third, because the core data and metadata are stored outside of the institutions' premises, they face a loss of ownership over their own research and research related metadata. This renders them susceptible to vendor lock-in scenarios, in which switching to another provider becomes virtually impossible. Higher education institutions are now highly dependent on for-profit (foreign) providers for basic functionalities such as e-mail and data storage (including in the cloud), meaning those providers can choose to increase prices beyond what institutions can afford as public-sector bodies, or can change the functionality of what they offer and force universities to accept their idea of what good educational or research software is. Finally, because institutions are often forced into 'secret' agreements with software providers, these contracts violate basic transparency and accountability requirements and cause institutions to be played off against one another.

Education

On the education side, the infrastructure choices of academic institutions have a major impact on students' freedom: students cannot choose not to use certain teaching software, test software, proctoring software, or administrative systems that store their marks. Academic institutions therefore have a special responsibility to use and share their students' data with the utmost scrupulousness: students should be able to develop safely and without chilling effects and not be forced to share personal data if they do not wish to, and it should be possible for them to delete their data profiles (i.e. force a company to delete any stored data about them) once they are no longer enrolled. Google, Microsoft, Zoom and many other companies have questionable GDPR policies.⁶ That is why Denmark, France and other countries have currently banned the use of Google and certain Microsoft products in schools. Finally, many teachers at higher education institutions develop their own teaching materials, funded by public money. It is therefore essential that teachers can share, exchange and adapt one another's materials freely (open education) and are not limited by paywalled and siloed platforms which is often problematic in licence-locked educational software, especially if it is also made technically impossible to export it and import it into another system.

6 * Human Rights Watch report <https://www.hrw.org/StudentsNotProducts>

* Mozilla's statement <https://foundation.mozilla.org/en/campaigns/microsoft-ai/>

* EU report https://www.edps.europa.eu/system/files/2024-03/EDPS-2024-05-European-Commission_s-use-of-M365-infringes-data-protection-rules-for-EU-institutions-and-bodies_EN.pdf

A healthy and safe ecosystem and our contribution to society

The loss of autonomy described above leads to the loss of a healthy academic ecosystem, impacting students, lecturers, researchers, librarians and anyone else involved in education. As higher education institutions lose the fundamental control over their research data, educational data and related metadata, they can no longer control the use of these data. Institutions become more and more dependent on the decision-making power of commercial companies, which in turn use that power to collect more and more data, resulting in a vicious circle in which companies embed themselves ever more deeply into the infrastructure of academic work. Possible threats to which institutional use of non-proprietary technologies exposes staff and students include surveillance or discrimination based on gender, ethnicity, religious beliefs, political affiliations and more. The open science movement has exposed the problems with publications, which are either hidden behind paywalls or made 'openly available' in exchange for stiff publishing fees that are unaffordable for many academics in less well-resourced institutions.⁷ Similar problems arise for educational resources developed by publicly funded educators (the open education movement advocates the open sharing of teaching materials).

We believe that higher education institutions have a duty of care and an obligation to ensure a safe digital ecosystem for their staff and students: where possible, they should enable freedom of choice in the use of software solutions, promote alternatives that embrace the principles of open science, and negotiate controllable and enforceable opt-out options for the storage of data and metadata. There should also be clear rules governing how data are being used to train AI models, and who benefits from this and to which end. Moreover, because higher education institutions spend public money, they should be transparent about any agreements made in their contracts. They can be held accountable in this way, ensuring that each one applies common and transparent practices and contributes towards establishing a sound culture based on transparency and accountability. Public money should be spent in a way that creates public value, so that the benefits of scientific research and education are accessible to all. A prime example of creating public value would be through the preferred adoption of Open Source software.

7 * Kowaltowski, A., Oliveira, M., & Chaimovich, A. S. H. (2021, August 31). *The push for open access is making science less inclusive*. Times Higher Education (THE). <https://www.timeshighereducation.com/opinion/push-open-access-making-science-less-inclusive>

* Ross-Hellauer, T. (2022). Open science, done wrong, will compound inequities. *Nature*, 603(7901), 363–363. <https://doi.org/10.1038/d41586-022-00724-0>

2. RECOMMENDATIONS

Given that the autonomy of institutions, researchers and students is under threat, we should take proactive steps to safeguard these essential freedoms. We therefore call upon higher educational institutions to:

- Develop a comprehensive vision on the core values described above and foster a broad and inclusive discussion about them.
- Recognise that such factors as security, cost and ease of use⁸ are not the only important criteria in choosing technological solutions – core values (such as individual freedom, the right to privacy, and the long-term autonomy of academic institutions) must also be considered.
- Collaborate with other institutions to avoid being played off against one another; negotiate collectively and assertively.
- Be transparent and accountable by maintaining a publicly accessible software portfolio, detailing the rationale behind choosing specific software packages.
- Establish clear guidelines for software procurement that include the values mentioned above as key and non-negotiable requirements and make these guidelines publicly available.
- Conduct regular reviews of existing software and IT infrastructure to ensure that new or updated features continue to align with core values and guidelines; avoid automatic opt-ins for new functionality.
- Invest in the internal expertise, knowledge and capacity needed to independently evaluate and monitor software providers.
- Prioritise open-source solutions whenever possible and only adopt software from vendors whose algorithms and practices align with the institution's core values.
- Foster and support spin-off initiatives whose solutions are made for and by the community, and support and invest in national and international initiatives that create or re-use solutions for and by the educational community.
- Ensure public funds are spent on solutions that generate public value.
- Maintain an active role in the development of digital infrastructures for knowledge production and promote diversity in technological solutions.

⁸ Note the common fallacy that a commercial solution equals ease of use. Off-the-shelf solutions often *appear* easier to use before the contract is signed, but we often end up having to provide in-house support, as the adoption of Pure at several institutes has shown.

- Develop an exit strategy to mitigate risks from vendor lock-in and guarantee continuity.

We call upon staff and students to get involved by:

- Raising awareness about these issues and their ethical implications; inform and engage yourself, your colleagues, your students and peers here and abroad.
- Actively approaching your institution's leadership about decisions regarding digital technology – ask why and how they are taking these decisions.
- Educating yourself about how public money is being spent at your institution – ask where public money is flowing to private companies and whether this is creating public rather than private value.
- Using and advocating for open-source solutions whenever possible.

3. READING AND CRITICALLY ASSESSING SOFTWARE CONTRACTS TO UNDERSTAND THE TERMS AND IMPLICATIONS. WHERE TO BEGIN?

Procure

Many software and other technological solutions are procured through a public tender, as required by EU rules. Such tenders are often formulated in a way that limits the competition to big commercial companies, however. We therefore call upon higher education institutions and policymakers to critically assess the procurement criteria so that new, smaller parties or new start-ups can compete (while maintaining essential guarantees to protect private data, for instance), supporting a pluriform landscape of providers. Open-source solutions and providers sharing the academic values outlined above should be preferred; if non-open solutions are adopted, it should be made very clear why there was no other choice available. In these tenders, it should be obvious whether and how a provider supports the core values of the institutions of higher education. Academics must be given a substantial voice in the design of the tools they will be forced to use, and tenders must explicitly rule out non-consensual data collection for non-academic purposes, even if this would be technically legal as a 'legitimate interest' of commercial corporations. Finally, we call upon institutions to be transparent in their decisions, and refrain from concluding 'secret' contracts.

Invest

To be able to properly assess software and other technological solutions and whether they adhere to the criteria highlighted above, we call upon universities to invest in in-house expertise. IT departments must remain or become capable of running the core infrastructure of universities independently, to avoid any structural dependency on external commercial providers. We further call upon universities to foster and support spin-off initiatives to ensure that solutions are developed for and by the community. They should support and invest in Dutch and international initiatives that create or re-use

solutions for the educational community. Very successful examples include eduroam, SURFconext, Zotero, JASP and ORCID, which have been made by and for the education community and are widely adopted, open and secure. Innovative services that safeguard the academic environment in the Netherlands and abroad cannot be created without investment by our institutions!

Lead by example

As researchers, teachers, staff and students, it is essential that we lead by example and remain mindful of the technologies we use, as well as their alternatives. Try to include these topics in education and your research, for instance when working on related student projects or research with PhDs and early-career researchers. Prioritise open-source, community-driven services such as Signal, SurfDrive, Mattermost and Zotero. Additionally, critically assess and hold your institution accountable for its technological choices.