



# Domain of One's Own: Learning Scholarly Writing and Publishing with Zotero, Quarto and Hypothesis

In the age of AI, new approaches are required to encourage students to develop critical reading and writing skills, as well as a scholarly attitude. In the "Introduction to Information Technology" course for vocational school education students, a socio-technical environment was introduced for writing blog articles, with ongoing feedback from the group and teacher.

#OpenScience #Scholarship #DigitalSovereignty

## 1. INITIAL SITUATION

Students who go on to become **teachers at vocational schools** after completing their Master's degree must attend the "Introduction to Information Technology" course at ITBH (T-3) for two consecutive semesters. In the second semester of their Bachelor's degree, students are required to complete a written assignment on a technical project of their choice based on Raspberry Pi, Python and AI. Given that **students are increasingly using AI systems to write** papers and seek assistance from these systems in their studies, conveying **the value of writing as a critical and constructive engagement with the world** (Emig, 1977) is becoming more challenging.

## 2. CHALLENGES & GOALS

- ❖ Course evaluations and feedback show that students appreciate detailed approaches to scholarly writing in collaborative environments (HedgeDoc<sup>1</sup>, Quartz<sup>2</sup>, Quarto<sup>3</sup>).
- ❖ Goal: Practicing a value-oriented scholarly mindset and necessary technical skills to write with sensible use of AI systems.
- ❖ Goal: Make students familiar with the same environment for writing that they use for programming.

## 3. PEDAGOGICAL CONCEPT

Following the idea of **Domain of One's One** (Division of Teaching and Learning Technologies, 2016), which at the core aims to provide a dedicated internet domain for every student during their time at university, students write blog articles frequently with **Quarto**, using **Visual Studio Code IDE** for writing with **Markdown** (Fig. 1). Teacher, tutor and peers give feedback with **Hypothesis**<sup>4</sup>, annotating and discussing directly on the websites.

Using **Zotero**<sup>5</sup>, students learn the value of tracking their readings and citing sources of various kinds in their articles.

**Generative AI (genAI) systems** are introduced and best practices shared, generated texts and prompts documented in the blogs and collaboratively annotated and discussed (Li, 2025).

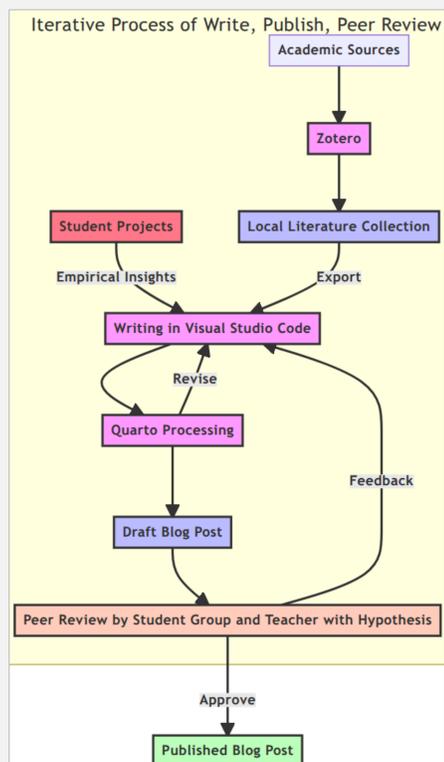


Fig. 1: Workflow of experimenting, reading, drafting, publishing, commenting and revising

## 4. TECHNICAL IMPLEMENTATION

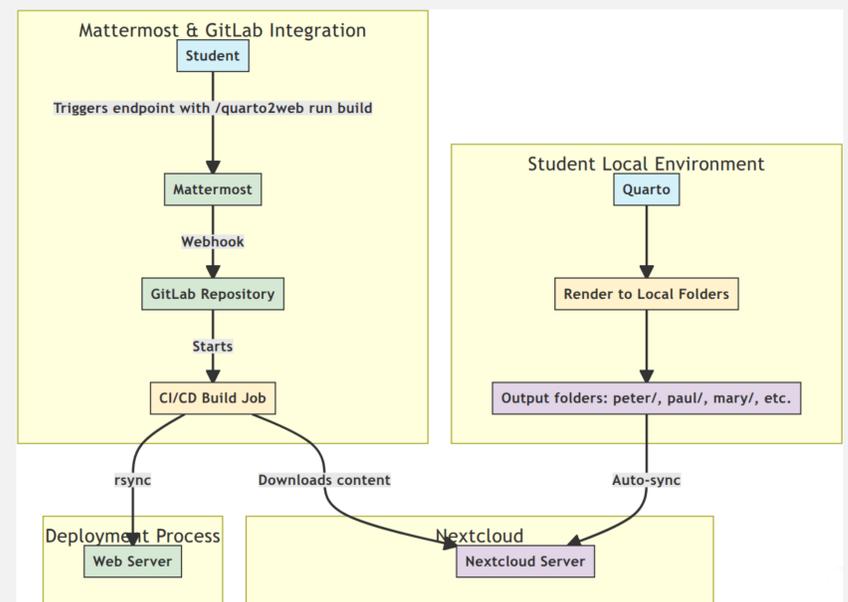


Fig. 2: Students' local **Quarto** blogs are synchronised with shared **Nextcloud** folders. A **GitLab** pipeline then picks up the blogs, renders them in a **Docker container**, and deploys the sites to a web server on the campus network. Students can initiate this process using a custom command in **Mattermost**<sup>6</sup>. This reduces the complexity of the process to a few steps while using a chain of established open-source tools to **maximise digital sovereignty**.

## 5. REFLECTION

- So far, students have given positive feedback on the skills they have learned when using Markdown to produce text in the provided environment.
- Students do not use AI tools to complete assignments quickly; instead, they report that they spend several hours writing their texts.
- This approach seems motivating, but it requires the group to be aware of peer commenting on texts in public with Hypothesis.
- Core aspects of Domain of One's Own, such as voluntarily enhancing websites and building web identities, are not fully realized yet.

## 6. CONCLUSION & OUTLOOK

The invented technical workflow is a promising approach to familiarizing students with the **values of Open Science** (Dürkop et al., 2019), while also teaching them technical skills using open tools to promote digital sovereignty. The quality of the final written assignments will demonstrate what has been learned.

## 7. REFERENCES

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<sup>1</sup>) Hedgedoc, see <https://hedgedoc.org/> <sup>2</sup>) Quartz, see <https://quartz.jzhao.xyz/> <sup>3</sup>) Quarto, see <https://quarto.org/> <sup>4</sup>) Hypothesis, see <https://web.hypothesis.is/>

<sup>5</sup>) Zotero, see <https://www.zotero.org/> <sup>6</sup>) GitLab at TUHH, see <https://collaborating.tuhh.de/> <sup>7</sup>) Mattermost, see <https://mattermost.com/> <sup>8</sup>) Learning arrangement "Einführung in die Informationstechnik", see <https://www3.tuhh.de/itbh/einfuehrung-in-die-informationstechnik/veranstaltungen/sose2025/>