Writing to clarify your thinking

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Writing helps you find out what you think, as well as report what you already know. For further reading, see the section Writing to clarify your thinking in the UCD-SERG lab manual.

Write the question down first

When a question or idea comes up, write it down right away, before you search for an answer or ask anyone. Writing it down does three things:

- It organizes your thoughts and shows you what you need to know.
- It forces you to state the problem precisely.
- It often leads you to the answer.

Leslie Lamport, a computer scientist who won the Turing Award, argues that thinking without writing is only the feeling of thinking (Lamport 2019). If you cannot write an idea down clearly, you probably do not understand it yet.

Send a written question

Once the question is on the page, you can send it to a collaborator, mentor, or forum. A written question lets the reader answer without a meeting to recover the context.

A good written question has four parts:

- the goal that you are working toward;
- what you did, with the code, data, or equation that you used;
- what you expected and what happened instead;
- what you have already tried.

Writing out these four parts often settles the question before you send it. When the question stays open, the reader has what they need to answer it.

Keep writing as the work grows

Apply the same habit to a whole project. Before you run the analysis, draft:

- the aims;
- the methods;
- the expected results.

A draft shows which parts of the plan you cannot yet state clearly, and those parts are where you need to think more.

Lamport, Leslie. 2019. *Think and Write with Leslie Lamport*. Podcast interview, Mentors.fm. https://mentors.fm/2019/08/13/think-and-write-with-leslie-lamport/.