Critical Thinking
Core Themes and Perspectives from Students and Teachers

Jorun Nyléhn, Cecilie Boge and Jonathan Soulé
Department of Biological Sciences (BIO), UiB
UiB Learning Lab
Centre for Excellence in Biology Education bioCEED, UiB

Critical thinking - more than a buzzword?

There is a broad consensus that university studies should facilitate students' critical thinking skills, as asked for in a multitude of policy documents and from work life. There is, however, a lack of consensus of what critical thinking is (Moore 2013, Gunawardena and Wilson 2021).

This is a small qualitative study based on a survey that explores students' and teachers' understanding of critical thinking, and what barriers they perceive prevent critical thinking.

A model for critical thinking

Thomas and Lok (2015) reviewed the research and identified three main categories: skills, dispositions, and knowledge.
Each of the main categories consists of three sub-categories in this model.
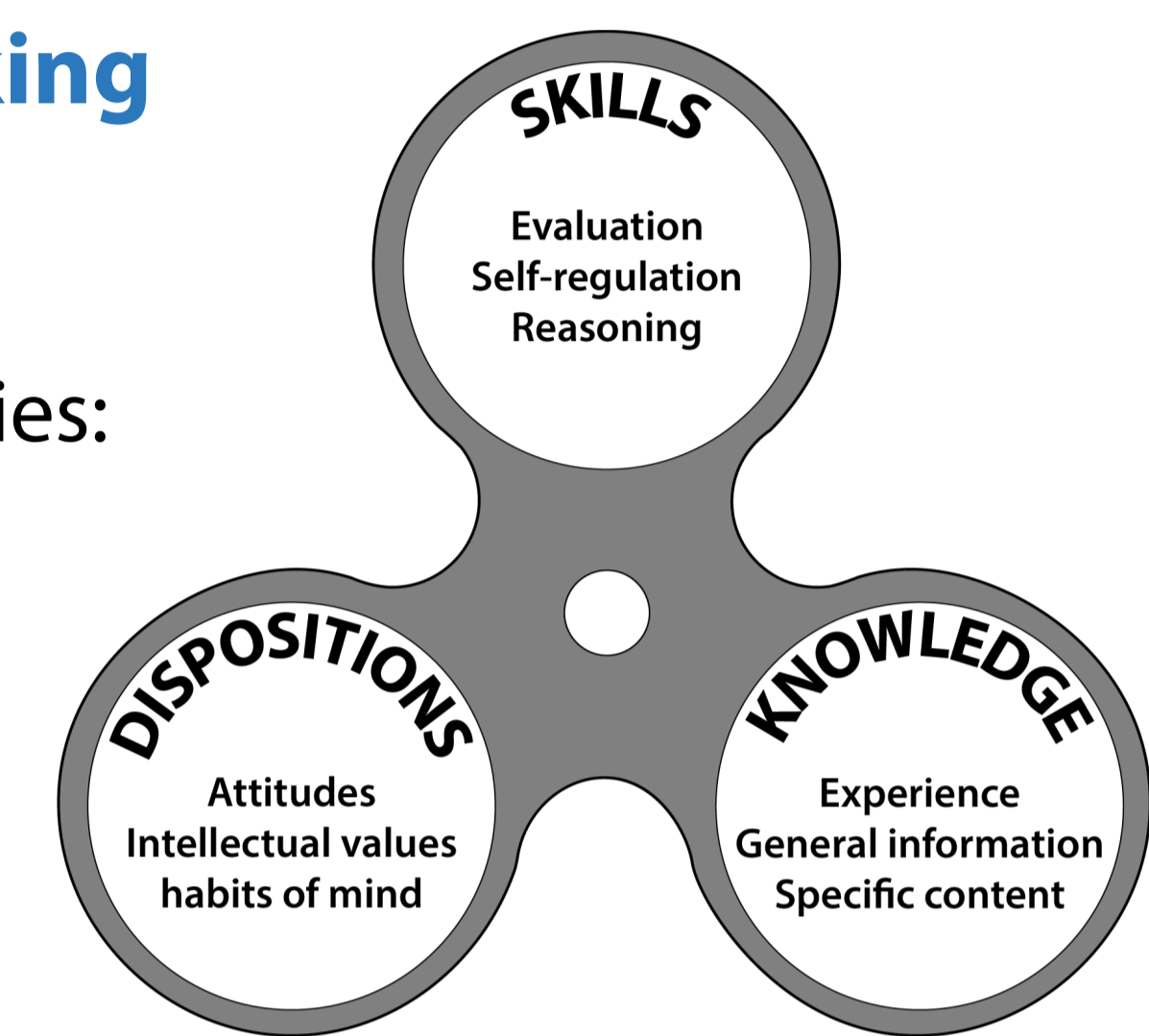
Perspectives from teachers and students

The wordclouds represent teachers' (left) and students' (right) perspectives of critical thinking, based on our survey.
When asked about to which extent critical thinking is part of the teaching, we noticed a certain discrepency between the teachers' and students' responses.
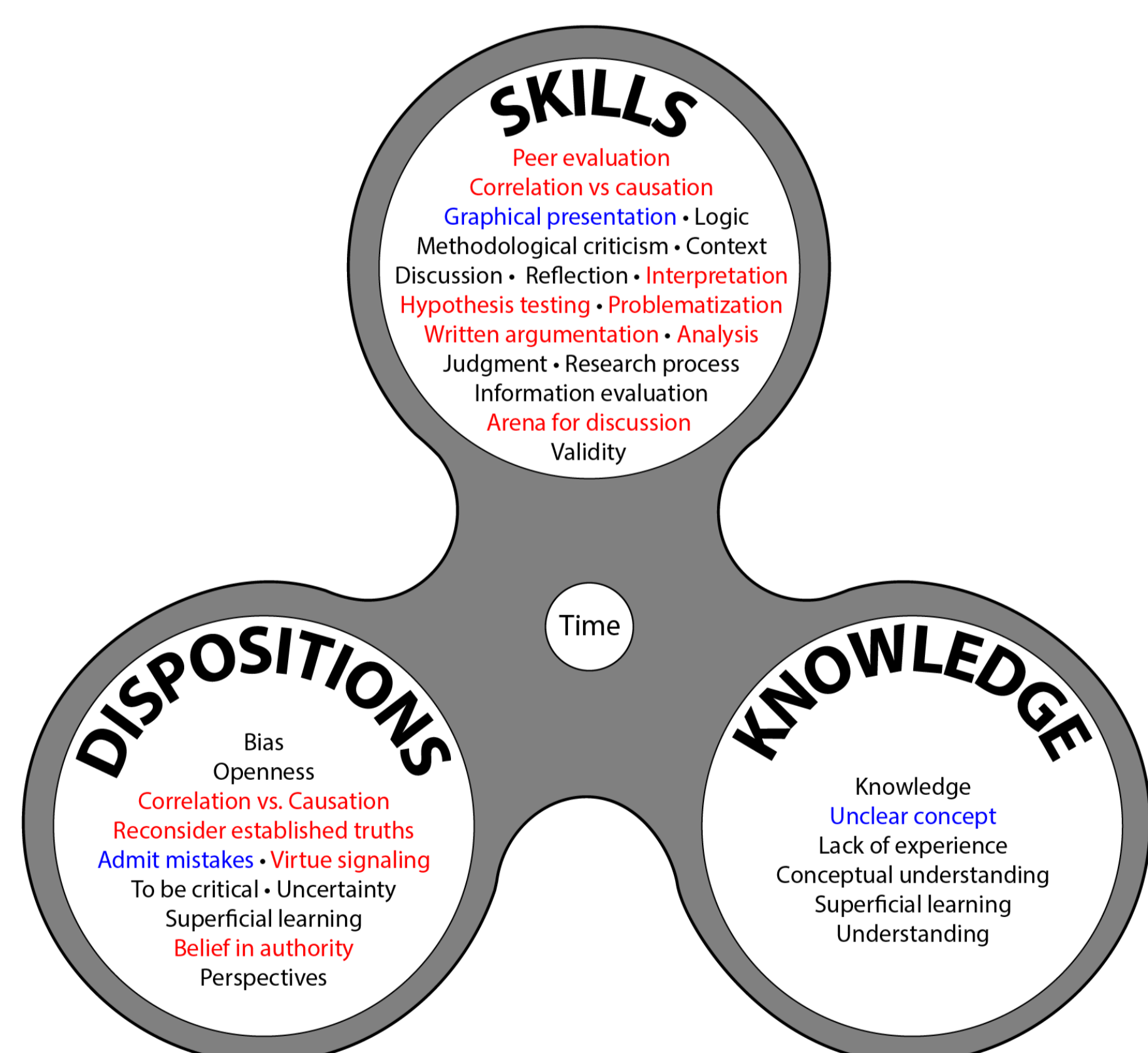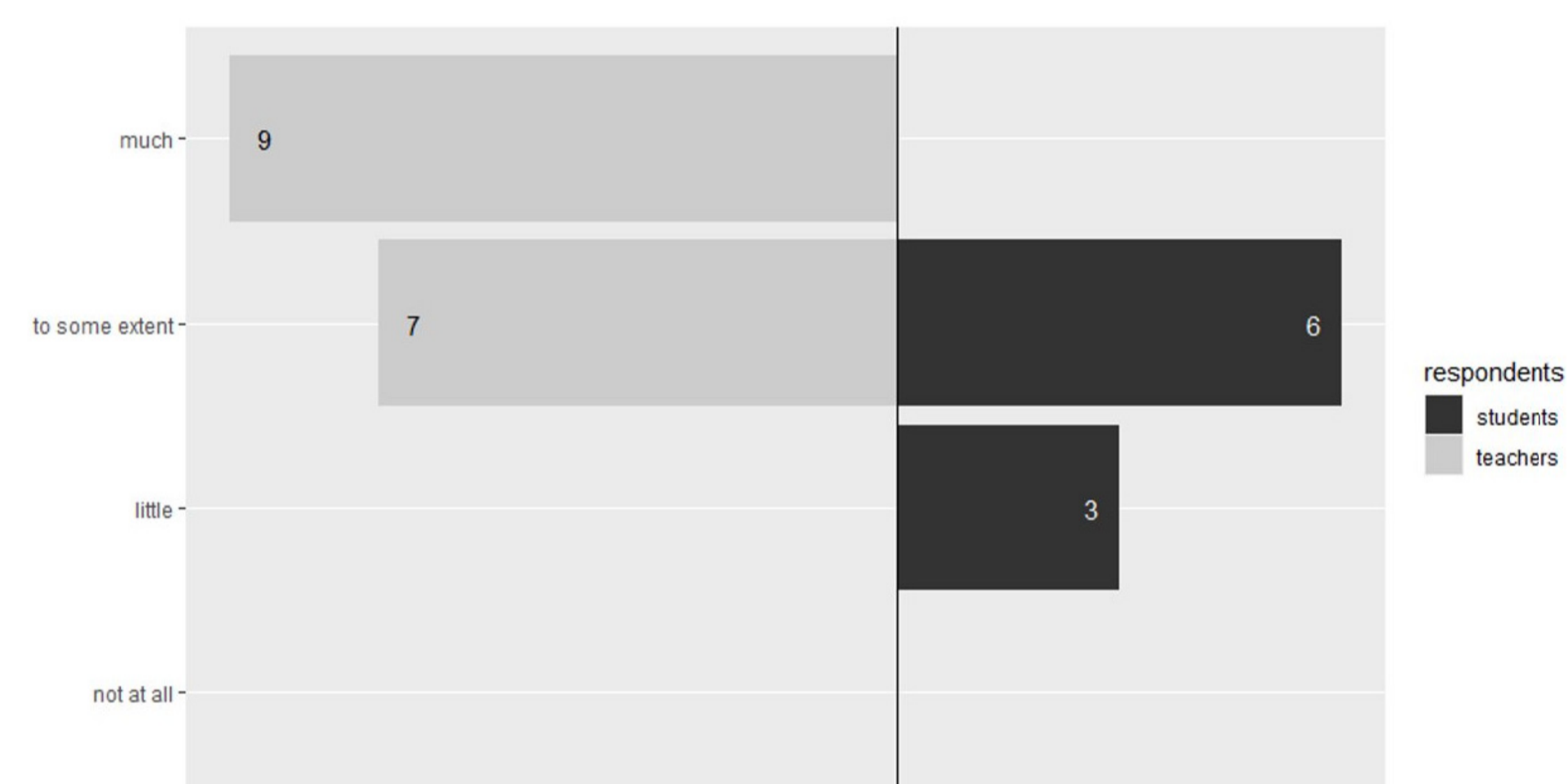
Results and discussion

In our study, we found three main dimensions in the concept of critical thinking among teachers and students at UiB: 1) skills (e.g., interpretation, hypothesis testing, evaluation of validity, discussion); 2) dispositions (e.g., predispositions and biases, openness for multiple viewpoints, willingness to reconsider established truths, belief in authority); and 3) knowledge (e.g., lack of knowledge and experience, lack of time, unclear concept). Our results are in accordance with the model of Thomas and Lok (2015).

Teachers mentioned more diverse examples of critical thinking than students, especially in relation to research skills. Both students and teachers reported time to be the main barrier for critical thinking. Other barriers were lack of adequate knowledge, experience, exposure to a multitude of perspectives and biases.

Recommendations for teaching

- Awareness of the multiple meanings of critical thinking
- Present multiples viewpoints for the students, let them compare and judge
- Cultivate an open mind and curiosity for other perspectives
- Give opportunity to be trained in argumentation
- Notify students whenever they apply critical thinking

References

Gunawardena, M., & Wilson, K. (2021). Scaffolding students' critical thinking: A process not an end game. Thinking Skills and Creativity, 41, 100848. https://doi.org/10.1016/j.tsc.2021.100848

Moore, T. (2013). Critical thinking: seven definitions in search of a concept. Studies in Higher Education, 38(4), 506-522. https://doi.org/10.1080/03075079.2011.586995

Thomas, K., & Lok, B. (2015). Teaching Critical Thinking: An Operational Framework. In M. Davies & D. Barnett (Eds.), The Palgrave Handbook of Critical Thinking in Higher Education (pp. 93-105). Palgrave Macmillan.