

# Beyond data collection: Reflections supporting students' learning about themselves



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## BACKGROUND & PERSPECTIVES

- Reflections are careful ways of thinking where an individual makes meaning of their knowledge (Dewey 1933).
- They are a useful data collection method in educational research, (Bashan & Holsblat, 2017).
- Reflections can also be used as a pedagogical tool to support students' learning (Yancey, 1998).
- Research shows that reflection can help students develop problem solving (Demirel et al., 2015), critical thinking (Leung & Kember, 2003), and metacognitive skills (Rhem, 2013).
- Reflections can also allow students to learn about themselves and their own learning (Rusche & Jason, 2011).



## FINDINGS

### Students' preferences for learning strategies

- Through reflections, students shared that they enjoyed collaborating with their peers in small groups.  
*"I like to work in smaller groups because everyone gets their ideas out. Everyone in the group gets their ideas out and nobody's left behind". (Kenai)*
- Students felt that working in small groups allowed them to express their ideas more easily than when working in larger groups.  
*"In smaller groups, I work better than bigger groups. I just think it's easier to communicate this way". (Lassa)*
- They also shared that working in small groups allowed them to get to know each other, and learn how to work as a team.  
*"We've learned about each other so we can be more careful on what we decide to do since we know what each other's strengths and weaknesses are". (Raza)*

### Students' areas for personal improvement

- Students mentioned that reflections allowed them to consider areas for personal improvement and how they can grow in these areas.  
*"Sometimes I have an idea and I talk over people which is not good. I could improve that by listening before speaking and then maybe raise up my hand". (Raza)*

- The areas of improvement included better team dynamics, participating more in class discussions, and being more helpful when peers had questions.

*"I remember that I tried to talk over a lot, which is something that I was trying to work on during this [project]". (Karshi)*

### Students' celebration of their strengths

- While reflecting, students shared that being active participants in discussions was a strength of theirs.  
*"I feel as if I really like to talk and speak and participate a lot, I think that is a pretty big strength of mine". (Raza)*
- Another strength that students identified through their reflections was the ability to be a good team member.  
*"One of my strengths that I brought to the team was good teamwork and collaboration". (Nairo)*



## CONCLUSION & SIGNIFICANCE

- Reflections helped students realize that they prefer small group work, similar to literature emphasizing that small group work is an effective way to engage students (Williams, 2011).
- Additionally, reflections helped students recognize personal areas of improvement, a trend in the literature on student reflection (Rusche & Jason, 2011).
- Through first-hand student accounts, findings from this study demonstrate the need to incorporate reflections into students' learning process and has implications for teachers who can use reflections to improve upon students' educational experiences.



## RESEARCH QUESTION

What did grade seven students learn about themselves while reflecting in their science and technology course?



## METHODS & DATA SOURCES

**Methodology:** Qualitative case study (Stake, 2013).

**Context:** This study took place at an independent girls' school in Canada as part of a research-practice partnership where one aspect of this partnership is to support teachers in implementing inquiry-based teaching and learning.

**Participants:** 16 students from one grade seven science and technology class where the teacher implemented student-directed inquiry.

**Data sources:** Oral reflections where the teacher asked students questions about their learning during class discussions and exit tickets in the form of written reflections which students completed at the end of the class.

**Data analysis:** Thematic analysis (Braun & Clarke, 2012) using the data analysis software (NVivo) and a codebook developed by the research team.



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## REFERENCES

- Bashan, B., & Holsblat, R. (2017). Reflective journals as a research tool: The case of student teachers' development of teamwork. *Cogent Education*, 4(1), 1374234. <https://doi.org/10.1080/2331186X.2017.1374234>
- Braun, V., & Clarke, V. (2012). *Thematic analysis*. American Psychological Association.
- Demirel, M., Derman, I., & Karagedik, E. (2015). A study on the relationship between reflective thinking skills towards problem solving and attitudes towards mathematics. *Procedia-Social and Behavioral Sciences*, 197, 2086-2096. <https://doi.org/10.1016/j.sbspro.2015.07.326>
- Dewey J. (1933). *How we think*. Prometheus Books.
- Leung, D. Y., & Kember, D. (2003). The relationship between approaches to learning and reflection upon practice. *Educational Psychology*, 23(1), 61-71. <https://doi.org/10.1080/01443410303221>
- Rhem, J. (2013). *Using reflection and metacognition to improve student learning: Across the disciplines, across the academy*. Stylus Publishing, LLC.
- Rusche, S. N., & Jason, K. (2011). "You have to absorb yourself in it" Using inquiry and reflection to promote student learning and self-knowledge. *Teaching Sociology*, 39(4), 338-353. <https://doi.org/10.1177/0092055X11418685>
- Stake, R. E. (2013). *Multiple case study analysis*. Guilford press.
- Williams, S. (2011). Engaging and informing students through group work. *Psychology Teaching Review*, 17(1), 24-34.
- Yancey, K. B. (1998). Getting beyond exhaustion: Reflection, self-assessment, and learning. *The Clearing House*, 72(1), 13-17. <https://doi.org/10.1080/00098659809599378>