

Exploring the value of integrating peer mentoring, reflective exercises, and collaborative learning tasks on students' experiences in an online cell biology course



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INTRODUCTION

Engaging “students as partners” is an integral part of the scholarship of teaching and learning as it provides an opportunity to navigate and understand different perspectives, ultimately providing insights into ways that we can improve knowledge sharing and experiences in the classroom. Peer mentoring is an example of how teacher-student partnerships can be effectively implemented in post-secondary classrooms. One way that peer mentoring occurs is when senior students and professors collaborate to “mentor” and improve the learning experiences of current students taking a specific course. This is crucial as it provides the first step towards dismantling traditional structures of hierarchy that exist in the classroom, with the potential to improve the learning and psychosocial experiences of all students. While peer mentoring has been widely studied in in-person settings and has been shown to have numerous benefits for all parties involved, its feasibility and benefits in an online setting largely remain unexplored. Current literature lacks evidence and discussion on how peer mentoring can be implemented in online classrooms and whether it yields similar results to in-person settings.

OBJECTIVE

Our project explored the feasibility and benefits of incorporating peer mentoring and longitudinal collaborative learning opportunities and activities into an online second-year undergraduate Honours Cell and Molecular Biology course on students' experiences.

METHODS

A senior student who had previously taken the course served as a peer mentor. On the first day of the course, all 94 students were assigned into 16 equal groups. Students met in these groups through online breakout rooms twice a week as part of scheduled class time while the peer mentor, TAs, and the professor visited each group. Students collaborated to complete weekly concept maps which would be posted on D2L for others to view. Individually, the students also submitted weekly reflections in response to prompts given by the peer mentor. These reflections were submitted to an online learning platform called Desire to Learn (D2L) and could be viewed by members of their group. The data for this study was derived from the weekly reflections and analyzed qualitatively to identify themes using NVivo.

RESULTS

Major Driving Factor Themes (Benefits for Students)

Overall impact from the peer mentoring and redesigning of the course



Sense of connectedness and community

Weekly reflections that were shared with group members



Increased self-awareness & improved mental-well being

Collaborating with group members to complete weekly concept maps



Development of autonomy and competence

Longitudinal collaboration during class time (every week with the same group)



Positive views on peer collaboration and collaboration across the powerlines

DISCUSSION

Our findings provide evidence for the feasibility and **benefits of incorporating peer mentoring in an online setting**, which can be used as a model for other courses. Contrary to popular belief and most literature, which views reflections as an independent and often private exercise, our study demonstrates the benefits of **using weekly reflections** as a collaborative learning tool that allows students to connect with their peers and the teaching team, develop a sense of community, and better understand their mental well-being. **Concept maps** were also identified as an important collaborative activity that can easily be incorporated into online peer mentoring and yield benefits for students.

MAIN TAKEAWAYS

- Peer mentoring can be easily and effectively incorporated into an online setting
- Through peer mentoring and the incorporation of regular collaborative activities, it is possible to create a similar learning environment as in-person
- To gain the most out of collaborative practices, students must be given consistent and longitudinal opportunities for group work as part of regularly scheduled class time where they can also engage with professors, TAs, and peer mentors