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# ENABLING STUDENT SUCCESS THROUGH REFLECTION AND STUDY PLAN CREATION

Christopher Love

Presenting Author: Christopher Love ([c.love@griffith.edu.au](mailto:c.love@griffith.edu.au))  
School of Environment and Science, Griffith Sciences, Griffith University

**KEYWORDS:** Student success, study plans, self-reflection.

**SUBTHEME:** Modes of Learning

## PROBLEM

Are students entering university with the appropriate skills to be successful? First year students in large science, technology, engineering, and mathematics (STEM) classes are required to navigate a large level of content and complex concepts and this can significantly impact success and retention. Success can be impacted further if students are 'first in family' (>50%); speak English as a second language (32%); or from low socio-economic backgrounds (21.2%).

## PLAN

The approach involved students evaluating and reflection on their performance then creating study plans to improve success on future assessment (online quizzes and the final examination). Students reflecting critically on their performance can guide their self-awareness, identify their strengths and weaknesses, and allow them to take greater ownership and responsibility which support students in becoming self-learners (Tsingos, et al., 2014; Chan & Lee, 2021).

## ACTION

Students were asked to evaluate their performance after each quiz and reflect on how they studied for this assessment. Upon reflection, students were required to create a study plan to improve or maintain their performance on the next quiz. A simplified set of learning strategies that have been reported to improve performance were provided (Hora & Oleson, 2017; Sebesta & Speth, 2017) and student needed to incorporate two of these strategies were incorporated into their study plans.

## REFLECTION

Our initial findings revealed that 66.1% of students reported that creating a study plan contributed to maintaining or improving their grade and student reflections supported this data. The most surprising element of this research was that 60.9% of students reported that they had never developed a study plan prior to this course in semester 2 of first year suggesting that students were entering higher education without the basic learning skills to be successful. Most students commented positively on the study plans supporting their learning, for example, "My experience with creating a study plan allowed me to identify my own strengths and weakness, strategies that work for me in learning and revising work and also making sure I stay on top of my work and being responsible of sticking to what I planned out." However, many students reported that they didn't fully enact their study plans due to competing assessment, personal life and work commitments. In addition, a lack of motivation (7.2%) and mental health and wellbeing issues (11.6%) reported by students were more concerning. Despite these issues, 30.2% of students improved their performance in Quiz 2, and there was a decrease in the fail rates for the course from 38% in 2018 to 27% in 2019 which demonstrates the impact of study plans on student performance and highlighted the need to embed study skills in first-year courses.

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Proceedings of the Australian Conference on Science and Mathematics Education, The University of Canberra, 18 – 20 September 2024, page 69, ISSN 2653-0481.