

Expanding the teaching toolbox: supporting teachers to use a wide range of strategies

Embedded Instructional Leader Pathway Mathematics Growth Team

The Rivers Secondary College Richmond River High Campus is home to Embedded Instructional Leader and Head Teacher Mathematics, Rhylea Humphrys. Working with colleagues and students, Rhylea supports, challenges, and improves the pedagogical and assessment practices of mathematics educators.



Rhylea Humphrys
Instructional Leader

The Embedded Instructional Leader Pathway (EILP) is a workstream of the Mathematics Growth Team (MGT), comprising secondary teachers who participate in structured mentoring and coaching from the MGT to build skills to support, challenge, strengthen and improve teaching and assessment practices of educators within their school context. Through this work, they develop a strong understanding of and experience in improving student learning outcomes within their KLA and redefining the mindsets of students, teachers, schools and local communities.

Being school-based and continuing to teach within the school allows team members to maintain currency with constraints and challenges faced by teachers. It also improves their ability to provide personalised professional learning at the point of need for individuals and teams of teachers (Martinovic et al., 2017). Embedding the Pathway into schools also enables mentoring and coaching with staff over a sustained period of time, which is a crucial part of implementing long-term changes in teaching practice (Cartwright, 2020).

At schools where the EILP operates, teachers participate in a range of contextualised professional learning formats. These include lesson observations, structured discussions on pedagogy, reflection on practice and action research.

The Rivers Secondary College Richmond River High Campus

The Rivers Secondary College Richmond River High Campus, located in the township of Lismore, is a medium-sized comprehensive public high school. Our school community is diverse, comprising a unique mix of rural and urban families, a wide range of

socioeconomic groups, and households representing diverse lifestyles and identities. First Nations cultures make up a significant portion of our student body. Over the past two years, student enrolment numbers have decreased due to demographic shifts in our local population. In early 2022, our school community was significantly impacted by a devastating flood event, which continues to affect the area. Many families have left due to housing loss, an ongoing housing crisis, and reduced employment opportunities locally. The school goals include improving collaboration between teachers to build teacher expertise and improve student outcomes.

Key focus areas for the EILP at The Rivers Secondary College Richmond River High Campus

Rhylea identified a need to build teachers' confidence in developing a classroom culture that supports teaching mathematics using a wide range of strategies, aiming to improve student's ability to work mathematically. Teachers needed support to deliver the new strategies utilised in DoE resources. Without support the effectiveness of the carefully designed, evidence-based approaches might have been reduced. The intention and connections within the lessons could be lost in delivery if teachers weren't equipped to implement them effectively.

Focus 1

Use lesson observations to enhance teaching strategies and understanding of DoE lesson structures and approaches.

Peer observations enable teachers to compare, analyse, interpret, and evaluate their teaching and students' learning, and provide a focus for dialogue about classroom teaching. (Özdemir, Nedim. 2020) The mathematics faculty expressed an interest in observing each other's lessons. The main motivation was to see a range of approaches for implementing DoE resources within the context of their classrooms and with their students. Rhylea utilised this opportunity to foster collaboration, encouraging teachers to feel comfortable approaching one another and sharing ideas, including engaging with a local primary school for cross school observations. Following each observation, teachers completed a post-observation survey to encourage

reflective thinking and consider potential adaptations for their own classrooms. In follow-up conversations, all teachers reported that they had adjusted their practice based on these observations.

Focus 2

Building teacher confidence in using DoE resources

Through working with a Math Growth Team at our school in prior years, teachers identified they valued engaging with research, trialling tasks as a faculty and working in teams. To build confidence in using the DoE resources, I decided to incorporate these elements as key tools.

- **Continuation of faculty book club:** Each semester, a teacher selects a research stimulus for the group, which is discussed in a designated faculty meeting using a discussion protocol. In Semester 1 of 2024, teachers could choose between two podcasts on teaching focusing on group work, accountability, and chants or self-explanation. By Semester 2, the faculty identified a need for deeper understanding of self-explanation prompts which led to reading Michael Pershan's Teaching Math with Examples.
- **Working Mathematically together:** Every faculty meeting begins with teachers working in groups on a mathematical task from an upcoming DoE lesson. The faculty discusses possible extending and enabling prompts and considers how the task might unfold in the classroom. This approach ensures that teachers are familiar with the tasks and prepared for potential adjustments or challenges that may arise.

Focus 3

Collaborating with a beginning teacher

Support for beginning teachers, including effective mentoring, builds teachers self-efficacy, disposition, acquisition of knowledge and skills as well as increases retention rates and teacher effectiveness in the classroom. (Lambeth, 2017) Rhylea supported a beginning teacher who wanted to expand her teaching strategies to include strategies such as using mini whiteboards and Polypad. Rhylea observed her classes to gather data on her current practices and researched effective strategies. They collaboratively reviewed strategies to ensure they were suitable and of interest to her. Rhylea modelled strategies and supported her further in implement them herself. As a result, she has grown more confident in using visual representations and now regularly incorporates mini whiteboards and vertical whiteboards in her lessons. She has noted an increase in student engagement using whiteboards.

Observable impacts

- **Lesson observations:** This initiative enhanced collaboration among the faculty as well as increased individual teachers' confidence and reflection. Structured peer observations and lesson sharing fostered a supportive community where educators could learn from one another. Teachers gained confidence in trying new strategies and post-observation surveys encouraged reflective thinking, prompting teachers to identify and adapt effective practices for their classrooms which has built a faculty culture of continuous improvement. Overall, this initiative empowered teachers to enhance their teaching practices while strengthening professional relationships within the faculty.
- **Book club:** Engaging with research has become a core aspect of our faculty practice. This has been evidenced in teachers referencing research and literature when explaining assessment task choices and teaching strategies. It has improved everyone's understanding of different practices and inspired teachers to trial new classroom methods. Through the process of engaging with research teachers naturally reflect on their practices which challenges norms and encourages discussion within the faculty. The depth of talk within faculty meetings and in the staffroom has improved significantly.
- **Working Mathematically together:** This has encouraged collaboration among faculty members who do not necessarily gravitate to each other and has fostered professional trust. This has opened channels for deeper, more meaningful discussions in both the staffroom and faculty meetings.
- **Collaborating with a beginning teacher:** Collaborating has strengthened our professional relationship significantly. Rhylea held semi-regular check-ins with this teacher, and she frequently sought advice and support. Her confidence has grown - not only in using the strategies discussed but also in trying new approaches. She has expanded her pedagogical toolbox to include card sorting activities, vertical whiteboards, and the regular use of group work in her classroom. This partnership has also led her to appreciate research-based approaches. Moreover, she has observed increased student engagement due to these changes.

Find out more

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