

SENATE ESTIMATES - 15 FEBRUARY 2024

Opening statement from AERO CEO, Dr Jenny Donovan

Thank you for the invitation to speak with you again. Last time I used my opening statement to speak about AERO's purpose and governance. Today I'll take the opportunity to give you insight into just one of our projects, relating to effective teaching practices in schools, as an introduction to the type of work AERO does.

Over recent decades, our understanding of how learning happens has dramatically improved. Learning involves knowledge being recorded in our long-term memories, enabling us to recall and apply it with ease. This can be knowledge about facts or processes. Having knowledge in long-term memory is essential for skills like critical thinking and problem solving. There is no known limit to the capacity of long-term memory. But the gateway into long-term memory is our working memory. Working memory is where we focus on information we're actively trying to process at any given time. For new knowledge to be absorbed, it must be processed within working memory and connected to existing knowledge in our long-term memory. Unlike long-term memory, working memory is extremely limited in capacity. Overloading working memory with too many new concepts at once, or other distractions, makes it far less likely that any those concepts will be properly processed and embedded into long-term memory. In short, it is very unlikely learning will happen.

It is an exciting time in education where this insight from cognitive science meets education research. Over decades, study after study has shown that explicit teaching and associated teaching practices are the most effective strategies to ensure students learn, retain and can apply knowledge. Now we know why explicit teaching works best; because it matches how we are designed to learn. The core of explicit teaching is new knowledge gets presented clearly and in small, sequenced chunks, with an expectation of mastery and opportunity for practising and retrieval. Research has produced these findings consistently across subjects, student age groups and gender. Explicit teaching has been shown to be particularly effective for students experiencing disadvantage and for students with learning difficulties.

This is information that every teacher should know. It doesn't mean every teacher must teach every lesson this way all the time, but it does mean this way of teaching should be expectation; the foundation; the main approach; the default from which teachers may make conscious and planned decisions to depart, based on their professional judgement.

Since my last appearance before you, AERO has released a summary of the evidence of how students learn and the implications for teaching practice. The practices in this summary were identified from extensive peer-reviewed research using AERO's Standards of Evidence as a filter. AERO's Standards privilege rigour and relevance to Australian contexts, and are available on our website, along with a full reference list.

We have also released A model of learning and teaching entitled "Teaching for how students learn", as a more accessible resource for teachers. The model is a one-page, visual schema of how the various practices that make up evidence-based teaching fit together, and how they align with the learning process. The model includes the explicit teaching of knowledge which I have referred to, but also practices around classroom management, cultural safety and inclusion, which establish an environment where learning can thrive.

AERO worked with research experts, stakeholder groups and teachers themselves in the development of the model, to ensure the content is not only evidence-based, but also engaging, actionable and relevant. We are now working to add supporting resources, such as guides and videos to demonstrate the practices for teachers.

We are also working in schools in South Australia, Victoria and New South Wales to learn about enablers and barriers to implementation, as well as developing guidance for education leaders about what they can do to support the implementation of these practices.

I hope this example has been useful. I'm happy to answer questions about this project or any other aspect of AERO's work.