

I would like to begin this submission by commending the panel for their work on this important area to date. The review is exemplary, is in line with the best available evidence, and if the reform recommendations are followed, will have a large and positive impact on Australian initial teacher education, and the profession as a whole.

I have a few brief comments to add in relation to Reform area 1. I could write much more, but I am aware that you many have many submissions to get through, so I will get straight to the point:

Strengthening ITE programs to deliver confident, effective, classroom ready graduates – some additions and considerations:

- I would recommend re-naming ‘Brain and learning’ to ‘Cognitive and Learning Sciences’, as the phrase ‘the brain’ in this context has a troubled history, especially the use of it in initiatives such as ‘brain gym’, etc.
- It is important to further emphasise within future work that cognitive and learning sciences are not simply a ‘unit’ to be covered, but a theme to run throughout the entirety of teacher education. Human cognitive architecture is the basis of learning, and it should be constantly and consistently referred to
- Lee Shulman has highlighted the importance of Pedagogical Knowledge (PK) *in tandem with* both Content Knowledge (CK) and Pedagogical Content Knowledge (PCK). However, teacher education will be restricted to only Pedagogical Knowledge if we fail to specify the content that our grads are to teach. It would be valuable to more strongly advocate for greater content specificity in ITE. This could follow the German model in which student teachers are presented with the teaching content resources during the early stages of their ITE. This could be one way to ‘ensure [that] curriculum- specific ITE content embeds the evidence-based practices.’ (one of your review questions
- In addition to the resources and references already mentioned in the review regarding numeracy instruction, I also draw the panel’s attention to:
 - Booker, G., Bond, D., Sparrow, L., & Swan, P. (2015). *Teaching primary mathematics*. Pearson Higher Education AU.
- In terms of additional instructional strategies that may be worth considering, the panel may like to supplement the current (well placed) emphasis on explicit instruction with mention of self-regulated learning. This is to be particularly emphasised in upper high school. This is not an area to be overemphasised, but rather to be touched upon whilst highlighting the need to scaffold students towards success in learning environments that require higher levels of self-regulation, such as higher education. See the following for key research and practice guidance on this front:
 - Research: ‘students’ ability to manage their own studying is one of the more important skills that students need to learn, with consequences that will be felt throughout their lives’ (Pashler et al., 2007)
 - Pashler, H., Bain, P. M., Bottge, B. A., Graesser, A., Koedinger, K., McDaniel, M., & Metcalfe, J. (2007). *Organizing Instruction and Study to Improve Student Learning* [Data set]. American Psychological Association. <https://doi.org/10.1037/e607972011-001>
 - Research: Meta-analysis on impact and guidance
 - Dignath, C., & Büttner, G. (2008). Components of fostering self-regulated learning among students. A meta-analysis on intervention studies at primary and secondary school level. *Metacognition and Learning*, 3(3), 231–264. <https://doi.org/10.1007/s11409-008-9029-x>

- Guidance: A crucial framework for helping teachers to scaffold the increasingly self-regulated use of effective study practises (such as retrieval practice, spacing, etc)
 - McDaniel, M. A., & Einstein, G. O. (2020). Training learning strategies to promote self-regulation and transfer: The knowledge, belief, commitment, and planning framework. *Perspectives on Psychological Science*, 15(6), 1363-1381.
- Guidance: The title suggests it is for college success, but it is highly transferable to the schooling context)
 - Dembo, M. H., & Seli, H. (2012). *Motivation and learning strategies for college success: A focus on self-regulated learning*. Routledge
- I would like to highlight one line within the review to ensure that its emphasis is not lost in subsequent work. That line is, '[teaching] students should develop an understanding of, *and opportunity to practice*, establishing rules and routines, implementing proactive practices such as having high expectations and implementing responsive behaviour management' (pg. 16) [emphasis added]
 - Teaching is a performance-based profession. As such, success depends not only on grads having key knowledge and skills, but also the ability to combine these complex knowledge and skills, in the moment, and at the same time as holding the attention of 25-30, often restless, young people. We know from the research of Andres Ericsson and David Hambrick that within performance-based professions, rehearsal (aka: Deliberate practise) plays a key role to success supporting practitioners to perform at a high level when it counts. This could be further emphasised within the review.
 - To this end, the panel may find it valuable to explore the following work, already established within Australia:
 - LaTrobe University's *Practical Classroom Management* short course, which allocates approximately 35% of instructional time to deliberate practise.
 - Fogarty Foundation's *EdVance Intensive* in which, over four days, both new and established teachers spend the morning actively rehearsing and receiving feedback on their teaching, and then put that practice to the test each afternoon in front of a class of live students.

I am willing and able to further discuss any of the above points, or provide further references as needed.

Thank you again for your fantastic work in this space. It makes me more hopeful for our profession in Australia.

Kind regards,

Oliver Lovell