Towards more responsive education and training arrangements for healthcare providers: educational considerations

This submission is a personal response and does not necessarily reflect the views of RANZCOG.

The proposed responses in the section titled *More responsive education and training arrangements* (*Table 2: A summary of the Commission's draft proposals*) address organisational and systemic concerns within current healthcare education and training. Whilst these structural considerations are acknowledged as vitally important, these proposed responses fail to consider the educational programs and methods that function within these organisations and systems. This submission addresses that gap, with special reference to the education and training of medical specialists.

Policy suggestions have been proposed to facilitate workforce flexibility and responsiveness to workforce planning[1] [2]. This submission argues that educational considerations are similarly fundamental in effecting change. For solutions, we need to drill down below the organisational surface and tackle the issues and assumptions associated with existing approaches to medical education and training. In Australia, education and training takes place within the context of practice for medical specialists, and although this principle is supported within the literature on cognition and education[3] [4], its sustainability as an adequate training environment is less certain. This submission argues that the existing apprenticeship model, which still adheres too closely to craft-group traditions and training experiences as remembered by current medical specialists, needs to be re-shaped and reinvigorated through the application of cognitive and educational theories.

Drawing on studies in Cognitive Science

Attention is drawn to research that is beginning to inform medical education in practice settings, offering the opportunity to implement more effective programs and methods[5] [6] [7]. The considerations outlined in this submission draw evidence from studies in **Cognitive Science**, a research field which is concerned with the knowledge structures and cognitive processes underlying human performance[8].

Relevant to education and training are the Cognitive Science studies in **expertise**, which focus on the development and characteristics of expert performance. Of particular interest are studies that identify the distinctions between novices (the beginning trainee) and experts (the independent specialist practitioner) in the application of complex knowledge to practice in professional settings[9] [10]. This evidence provides powerful tools to (1) understand better the processes of transforming a beginning trainee into an independent specialist practitioner and (2) sharpen our design of education and training programs and approaches for medical specialists.

Also within the field of Cognitive Science, a body of research titled variously **situated cognition** and **cognitive apprenticeship** emphasises the process of enculturation in which, for example, beginning trainees learn to engage in a community of healthcare providers and progressively assume the roles and characteristics of medical specialists[11 12]. These research areas are thus well-placed to inform the education and training of medical specialists.

Evidence that might inform the education and training of medical specialists

The following chart outlines research findings relevant to the development and maintenance of expertise and their application to medical specialist competencies.

Evidence: characteristics of expertise	Application
Possession of a domain-specific knowledge base that is both conceptually rich and intricately interconnected	Grasping biomedical concepts Seeing the central essence of a problem or situation
Possession of a well-organised knowledge base that can be accessed in selected 'chunks' of principles, which in turn facilitate appropriate action	Higher-order cognitive abilities such as decision-making, prioritising, information gathering and selecting appropriately, recognising key needs, filtering out irrelevant information, monitoring management choices Problem solving Judging own competency
Extensive and sustained practice in essential skills is necessary in achieving expertise; however, the *quality* of time spent on achieving expertise is at least as important as the *quantity* of time	Procedural skills Clinical skills (eg effective communication, team work, time management, teaching skills)
Ability to reflect on experiences, draw out key principles, and generalise to other situations; ability to monitor performance	Apprenticeship learning Case-based learning, case management
Ability to integrate prior knowledge and experiences, and apply in new situations	Case-based learning, case management
Ability to learn through interactive communication and participation	Team-based learning Supervisory/management development

It is clear from this information that different areas of learning and skill benefit from distinctively designed methods of education and training. A reasonable hypothesis is that programs that target and foster identified characteristics of expertise are likely to be effective and efficient in achieving learning outcomes.

Current workforce needs

Current workforce imperatives necessitate (1) more efficient education and training and (2) improved staff retention. Based on the evidence outlined above, this submission proposes some considerations that might address these needs. The considerations presented emphasise:

- The attainment of **competency,** rather than the length of training
- Structured, focused and supported approaches to training, potentially **reducing the length of training time**
- A career structure within the public system designed to **retain a strong consultant workforce**

Key considerations in education, training and retention

It is suggested that attention to the following interlocking considerations would enable and support a feasible and coherent program of enhanced education, training and career opportunities.

Consideration 1

That training programs and contexts are designed to emphasise development in competency and characteristics for specialist practice, rather than allowing them to be driven by service delivery.

This consideration would require a variance from the current employment arrangements, including

- the resourcing of extra-training opportunities within major training sites (for example, skills labs, computer packages designed to develop higher-order cognitive abilities, low-risk environments such as simulators for practising complex decision-making)
- provision of protected educational time (if properly managed, the pay-off in training progress is likely to more than make up for the costs)
- a culture of acceptance that computer technologies can provide a structured and systematic approach to skill development, extending that which is embedded in service delivery
- clear career pathways, offering an attractive workforce option--especially for early-career consultants

Consideration 2

That training programs are designed to structure training as competency-based stages, with a shift in emphasis from length of training to achievement of competencies

This consideration would require appropriate credentialing systems and training for assessors.

Consideration 3

That training programs, based on competency outcomes, lead on to early-career opportunities in public and private settings, with this early-career pathway aligned with workforce-based responsibility and accompanied by remuneration incentives

Consideration 4

That career consultants (including early-career consultants) are recognised as the main provider of specialist service delivery in public settings, with training programs focused on achieving stages of competency rather than being driven by service requirements

Consideration 5

That role substitution is evaluated for its feasibility in healthcare settings

This consideration requires identification areas of medical practice which might be safely and competently performed by non-specialist healthcare professionals, accompanied by appropriate training and credentialing programs.

A careful implementation of this consideration could potentially free trainees from much of the current expectations to provide routine, non-developmental service delivery.

Summary

This submission argues that cognitive and educational research evidence has much to offer the programs and organisation of medical education and training. New concepts and applications have been generated by research into cognition and education, with the potential to enhance education and training. There is good reason and the opportunity for us to do so now.

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