#3G1 (457) Can Critical Thinking be Taught?

Colleen Halupa, East Texas Baptist University/ A.T. Still University, Marshall, TX/ Kirksville, MO, USA
Michael Halupa

The concept of critical thinking has been discussed since the time of Socrates. Yet, there is no universally accepted definition of critical thinking. Generically, it is the ability to make accurate decisions in the face of changing events leading to the best possible outcome. In the late 1990s organizations, such as the American Association of Colleges of Nursing, began a movement to attempt to achieve critical thinking in health professions education. Yet almost 30 years later, faculty and healthcare supervisors still lament new graduates lack critical thinking skills, and even some experienced practitioners still cannot critically think.

Can critical thinking skills truly be taught? Some research studies indicate it can, while other research indicate it cannot be taught. In the classroom faculty use things such as evaluative assignments, laboratories and case studies to try to instill critical thinking in students. In clinical training students are often limited in the tasks they can perform independently. Because of the concentration on standardized testing in health professions education for certification and licensure are we really assessing if students can critically think?

In this session, the point of view presented is critical thinking cannot definitively be taught in an academic setting alone. The best teaching and assessment strategies do not always result in a health provider who can apply and evaluate the facts presented to him or her when assessing patients or evaluating diagnostic results. Critical thinking is something that can be developed over time by both experience and education, yet some people never really attain these skills. However, in many health professions clinical training time is being reduced and replaced by simulation. Without effective real-life experience, the critical thinking skills of new health professional will continue to be found lacking.

#3G1 Point of View 1
Location: Hall 3f

The Prato Statement on Cost and Value in Professional and Interprofessional Education

Stephen Maloney, Monash University, Melbourne, Australia
Scott Reeves, Kingston University and St Georges University of London, London, UK
George Rivers, Monash University, Melbourne, Australia
Dragan Ilic, Monash University, Melbourne, Australia
Jonathan Foo, Monash University, Melbourne, Australia
Kieran Walsh, BMJ Learning, BMJ, London, UK

The issue of cost and value in health workforce training sits at the interface of educational design and workforce planning. The efficiency and effectiveness of workforce training is essential in a climate of straining educational resources, health workforce shortages, an aging population, and where issues of health workforce migration undermine the universal provision of quality healthcare.

‘The Prato Statement’ proposes that the goal of economic analyses in education is to create an evidence-base towards education that delivers maximum value for a given spend – that drives education that is sustainable, accessible, and able to meet future healthcare requirements. We provide several recommendations aimed at guiding the agenda of cost and value in education, across the domains of knowledge, policy, and culture.

Knowledge
Cost and value in educational research has often been done haphazardly, and at times incorrectly. Economic evaluations have not historically featured in curriculum for health professional education or research training.
Recommendation: 1. Develop resources to promote basic economic literacy in creators and users of health professions education research. 2. Establish minimum standards for published literature

Policy
Consideration of cost and value is an expected component of many health policy and planning decisions. We propose that similar considerations be applied to education, that educational evaluation should include measures of both learner competency and resource consumption.
Recommendation: 3. Develop the expectation for measures of cost and value alongside educational studies.
4. Consider multiple perspectives of cost and value in decision making.

Culture
There is a historical divide between those who deliver teaching and those who allocate resources. Educators who harness evidence-based economic arguments may be better positioned to influence sector change, as well as demonstrate their own value to their organisation.
Recommendation: 5. Encourage academics to use economic reasoning to advocate for change, and demonstrate their educational worth.
OSCEs are outdated. Clinical skills assessment should be centred around workplace-based assessments (WPBAs) to put the ‘art’ back into medicine.

Hamed Khan, St Georges, University of London, London, UK

Decades ago clinical skills were mainly examined through ‘long cases’, with relatively open-ended instructions and significant case and assessor variation. Over time these evolved into OSCEs, which have become mainstay of undergraduate clinical skills assessment- largely because they are objective, consistent and reliable. But the OSCE format is so structured and well established that students now know what to expect. They prepare strategically to pass OSCEs, often adopting a robotic ‘tick-box’ approach, rather than use them as a tool to learn and improve clinical skills to become safe competent practitioners.

Thus although OSCEs facilitate technical competence, they do not prepare students for the unique nuances that make medicine an ‘art’ as well as a science. Several variables intertwine with pathology: the clinical context, psychosocial factors, patient perspectives, time and resource pressures, in addition to natural variation amongst individual humans.

I fear that OSCEs no longer prepare students sufficiently for these nuances, which often come as a shock to newly qualified doctors. In our quest for achieving consistency and reliability, we may be sacrificing validity and not preparing future doctors for the innate nuances and variability that make medicine so unique. In contrast work-place based assessments (WPBAs) such as CEXs and CBDs are used extensively for postgraduate assessment, but less so in undergraduate assessment. They are effective and allow us to assess the ability of students to adapt their skills in real life situations and think outside the box.

We need our future doctors to be not just technically competent, but also adaptable and able to vary their practice depending on the clinical and biopsychosocial context. To assess them accordingly, in my opinion we need a paradigm shift in medical education and assessment. WPBAs should now take centre-stage in undergraduate clinical assessment, and OSCEs significantly scaled back.

Medical students as a vital part of the job interview and hiring of future professors and faculty staff and curriculum making at the University of Copenhagen

Pernille Linde Jellestad, University of Copenhagen, Faculty of Health and Medical Sciences, Denmark
Andrea Daniela Maier, University of Copenhagen, Faculty of Health and Medical Sciences, Denmark
Ulla Wewer, Dean of Faculty of Health and Medical Sciences, University of Copenhagen, Denmark
Thomas Fahrenkrug, University of Copenhagen, Faculty of Health and Medical Sciences, Denmark

At many universities around the world professors and the faculty staffs are hired by their peers. The logic is that they know best when it comes to curriculum making, didactics and students need. In Denmark, the university legislation ensures that students are represented in all committees – including hiring committees. Thus, at the Faculty of Health and Medical Sciences, students are involved in both development and management on different levels – influencing decisions on administration, policy and academic content.

Student engagement is vital in the faculty’s development and the making of the university of tomorrow. Therefore, we – the medical students of the University of Copenhagen – participate in both the hiring of professors/course leaders/faculty staff. Staff who have a vital part in our education and make sure that we develop as doctors to be. They encourage and inspire us to keep chasing our passion, the medical science.

As students we also participate in the development of curriculum, accreditation processes and the establishment of policy guidelines. We take part in the changes made to the physical space at the university and the evaluation board. And the list goes on.

This responsibility will encourage us - the students - to make use of dialogue and involvement in our future job. And it will inspire us to be an integrated and active part of solution and decision making using our notion for creativity and eye for involvement when solving the problems of the future. In other words the benefit of student involvement transcends the university for the benefit of patients, colleagues and society.
There is globally a rising awareness of ethical implications for research, not only in biomedical sciences, but also in educational research. Research ethics guidelines and rules have emerged from biomedical fields of study. The way in which institutions approach ethical applications for educational research differ from country to country, and from institution to institution. Medical and health professions education researchers are mostly based in medical or health professions institutions or departments. Some ethics boards (ERBs) view educational research as very low or no risk research, and they seldom require full ethical applications. In my opinion, educational research can never be no or low risk, due to the vulnerability of students as participants in an environment where there is a power relation between the lecturer (who may also be the researcher) and students, and where issues regarding anonymity and confidentiality may arise. On the other hand, some ERBs expect educational researchers to go through the same rigorous ethical application process as medium to high-risk clinical research. Yes, educational research must adhere to the ethical and scientific criteria as all scientific research, but there may be a lack of understanding of the context and approach of educational research by (non-education) ethics committees. The problem arises when ERBs criticize educational research methodologies and prescribe methodologies that are more appropriate to clinical research. This may compromise the scientific quality of educational research. Some critical areas that need to be viewed differently from clinical research is voluntary participation of the students in a class, the informed consent process, the insider position of the lecturer as researcher, the time framework especially for action research and the lack of control groups. ERBs need to collaborate with educational researchers to find the ideal framework for health education research without compromising on scientific quality or ethical requirements.

Oral health is an integral part of the general health, and if left untreated, can affect us not only physically, but also socially and psychologically. Good oral health is important for healthy development and healthy aging, however, dental caries is the most common infectious and chronic disease in children. In the United States (U.S.), millions of children and even adults do not receive needed clinical and preventive dental services. The U.S. health care system is fragmented and continues to struggle to provide optimal, affordable and accessible patient-centered care. Dental care is commonly provided in private practices. Many barriers, such as lack of dental coverage, and limited financial means create barriers to receiving optimal care. Safety net organizations that provide dental services to uninsured, low-income, and vulnerable populations are not able to meet growing demands for dental care for all. New innovative ways to provide early prevention for risk populations are needed to improve the health. One model is to develop interdisciplinary education programs to increase the oral health education and training in medical and other health profession. Medical and other health professionals can be trained to identify oral health issues, educate and provide preventive services for their patients. The purpose of this point of view is to discuss the recent curriculum changes in medical, dental and other health sciences and provide global perspective for future innovative ideas to improve the oral and general health for all. Models used at the University of Florida and AT Still University will be presented and discussed.
#3G7 (1591)
Are We Too Soft on Our Trainees? Leveraging Desirable Difficulty to Enhance Learning

Teri L Turner, Baylor College of Medicine, Houston, Texas, USA

Over the past several years there has been an increasing emphasis on promoting and providing a supportive learning environment. We have been taught as educators to present information as simply as possible and to support our trainees to help them perform to the best of their ability. Students too want learning to be quick and easy. When our learners easily recall what we have just taught, we feel good that we have done our job as teachers and the students feel good because they believe they learned the material. What if we are both wrong? What if by being too soft on our learners, we are actually hindering the learning process? Over the past decade there has been an interest in the concepts of a growth mindset, grit, and the power of overcoming adversity. Although counterintuitive to some, research has shown that a certain level of difficulty actually increases performance. Robert A. Bjork first coined the term “desirable difficulty” and described it as conditions of instruction that pose challenges for the learner which appear to slow the learning process but can improve long term performance and retention. A key distinction is the word desirable, this cognitive strain is only desirable if it’s not too difficult. With effort the student will be successful in learning. The goal is struggle, not failure. It is time to leverage the concept of desirable difficulties to enhance long-term retention and transfer of knowledge. This includes spacing out material to be learned, interleaving or mixing topics together, testing, reducing and delaying feedback, teaching students how to actively read (SQ3R technique), and introducing unpredictability into our learning environments. We and our students need to accept the necessity of forgetting, struggling, making mistakes, and stumbling as a sign of progress (not failure) toward the ultimate goal of learning.

#3G8 (1622)
To disclose or not disclose information about graduating students to health services: A contemporary problem for medical education

Agnes E. Dodds, Melbourne Medical School, The University of Melbourne, Melbourne, Australia
Eleanor Flynn, Melbourne Medical School, The University of Melbourne, Melbourne, Australia
Jeanette A. Lawrence, Melbourne School of Psychological Sciences, The University of Melbourne, Melbourne, Australia

Medical educators often face problems about transferring information on graduating students to health services. One pressure comes from concerns about graduating students’ readiness to meet the demands and expectations of medical practice. Hospital managers expect work-ready doctors who come accompanied by personal information that can ensure patient care and professional support. Hospitals often pressure medical schools to provide information currently accrued in university procedures. An opposing pressure comes from educational responsibilities to preserve student privacy. Graduates expect to begin their professional roles unhindered by student baggage. Medical educators many of whom are clinicians are torn between opposing responsibilities to colleagues and students. Overarching concerns are the safety and wellbeing of patients and the rights and well-being of students. This perplexing situation is exacerbated by twenty-first century changes in student populations and by the complexities of person by institution rights and interactions. For example, student mental health issues have burgeoned, and medical schools now monitor student progress and performance intensely. Potential employers are aware of this and request such information to inform their decisions. Faced by conflicting loyalties, some medical educators retreat to the ‘old boy network’; some to parentalism. Any resolution however, must address the juxtaposition of individual and institutional rights and responsibilities. Patient and student rights are at the core. Medical educators caught between the goals and concerns of health services and young doctors need to be aware of the legality and ethicality of student privacy and how this impacts medical professionalism for all parties. In their professionalism teaching, medical schools must emphasise the need for students to take the initiative and not deny potential employers the information that can provide them with a supportive environment. They also need to instantiate the ethics of inter-institutional communication.
#3G9 (1181)
Ticking boxes: ideology, policy and the medical learning environment

Catherine Regan, University of Newcastle, Newcastle, Australia

My medical education odyssey began as a PBL student four decades ago, progressed through undergraduate tutoring and postgraduate CPD provision, followed by twenty years of conferences, PhD and educational leadership positions in GP training. I have observed ideology influencing learner experiences but, more recently, I have taken issue with the effect of policy on GP training. Am I just a grumpy old educator? Educational philosophy and ideology have influenced delivery with constructive tensions around curriculum, learning objectives, lectures versus small groups, performance versus Power Point. This is the micro learning environment. Overshadowing all is a macro environment which has adopted a managerial ideology that values accountability, numbers and minimum levels of competence over trust, quality and aspirations to excellence. It disempowers educators, prioritises non-educational outcomes, prefers training to education and measures effectiveness by box ticking. Decisions are made by bureaucrats and interactions are depersonalised. It affects quality issues such as training length, flexibility and scope of clinical experience. I care about how this policy environment impacts on learners, teachers and, potentially, the “product”. The ambience of the training system no longer models the values and attitudes we wish to instil: compassion, nurturing, mentoring, adaptability, capability, relationship, responsiveness and person-centredness. Does the way students are taught affect their future practice and how they go on to teach? Are we concerned or merely hoping each generation learns in spite of their learning environment? We should consider the influences on our training systems. The current context would have us fulfil our tasks as functionaries but educators need to look beyond this. It is part of our professional responsibility to consider the total environment and if the effects are detrimental we should not be acquiescent.