A 'Connectedness' Framework to Build a Resilient Health System through Education

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The Need to Connect

Traditionally, doctors are called to cure, to relieve, and to comfort. However, this is no longer sufficient. The nature of today's world creates complex health problems. These include widening gap between life span and health span, deteriorating mental health in the midst of rising economic wealth, and worsening chronic conditions and complications. Complex health problems require more than medical sciences and doctors to solve. They require other disciplines and professionals. How can higher education support this? It starts with the educational philosophy to create a connected health professions education system using a 'connectedness' framework. There are seven areas to connect in this framework.

Connect the Workforce

We need a workforce whereby health professions work with other professions to safeguard individual and population health through interdisciplinary solutions and approaches. At National University of Singapore Yong Loo Lin School of Medicine (NUSMed), this is achieved through the Minor in Integrative Health for students from various disciplines to learn about health and tackle real-world health problems together by integrating their disciplinary knowledge and skills. Health professions must also learn beyond their traditional knowledge and skills as well as learn to work together. This completes a tightly knitted interwoven health workforce that is ready to support HealthierSG and confront future health challenges in Singapore.

Connect Learners to Learning

We need to ask questions, "Are our learners truly learning? Is our teaching practice jading learners? Is the learning connected to real-world practice?" As learning approaches evolve, pedagogical practices must keep pace. We must reflect, rethink and reform the way we teach and assess. This is demonstrated through the reform of NUSMed curriculum where blended learning has completely replaced didactic lectures and learning videos are professionally produced to engage Gen Z and future Gen Alpha learners. These enhanced course and teaching effectiveness as well as clinical performance in later years.

Connect the Problem to Solution

Once learners are better connected to learning, they are better able to connect problems to solutions. Education on research needs to ensure that problems are 'chasing' solutions, not the other way round. To set this right, NUSMed developed a program called 'Beyond Medicine'. It emphasises a curiosity-first and values-driven approach to research. Through this, students have been able to produce high-impact, meaningful and socially responsible research.

Connect Information via Connecting Human to Technology

To solve complex problems, learners need to make sense of information. This is challenging especially when data is generated at breakneck speed and access to information is greater than ever, creating an overload. Educators will need to help learners sense-make, not just provide information. To support this, we developed technologies such as NUSMed-GPT to strengthen the learner-educator-information triad and NUS-Med2Lab ECR to help learners visualize clinical reasoning so that knowledge can be better applied in practice. Faculty development is key to transform mindsets and roles in order to reform pedagogical practices that include technology adoption with human in the loop.

Connect Human to Human and Connecting the World

However, complex health problems can neither be solved by technology nor a single entity alone. Human-to-human connection and a connected world remain essential to solving complex health problems. Educators are guardians to ensure student-student, student-faculty and student-community connections are fiercely protected, preserved and promoted. Technology must never creep in to steal, kill or harm these connections. On the other hand, out-of-classroom and experiential learning can facilitate these connections. To this end, I urge all educators to step out, explore, experiment and do more in this space.

To solve complex health problems, we must have the generosity to share and humility to learn. Global sharing of education ideas and innovations is the first step to foster these attributes in an increasingly fractured world. The 'connectedness' framework is aligned to NUS' push towards interdisciplinary education and likely to benefit learners at large.

The Seven Connects

Taken together, we need to **connect a workforce** that can **connect problems to solutions** so that these can **connect the world**. To do this, we must **connect learners to learning** by helping them to **connect information** through **connecting human to technology**. Above all, **connecting human to human** is central to education.

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Declaration of Interest

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