

Reflections on an interdisciplinary curriculum and pedagogical approaches in a public health course

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I. INTRODUCTION

The notion of *interdisciplinary health(care) education* is an emerging, though not novel concept (Allen, Penn, & Nora, 2006). The module *Social Determinants of Health* was introduced in the Saw Swee Hock School of Public Health in 2018. The module covered important foundational concepts in the study of social determinants of health and explored examples of such determinants over 13 weeks. The module adopted an interdisciplinary approach to public health, drawing from biomedical, psychological and sociocultural perspectives informed by both the natural and social science disciplines. Coursework took the form of student-led seminars, opinion editorial (Op-Ed) and reflective essays, and a fieldwork project involving a chosen group in the community. While the adoption of such an interdisciplinary approach, or the use of the chosen pedagogical approaches are not novel, we present our reflections on the implementation of a novel, interdisciplinary course in public health for undergraduates in Singapore who do not have prior knowledge or expertise in the subject area.

II. AN INTERDISCIPLINARY FRAMEWORK

Past literature on interdisciplinary pedagogies have highlighted the importance of introducing interdisciplinary subjects in the curriculum, drawing on students' varying backgrounds or disciplines in collaborative learning, and the focus on problems or issues instead of concepts (Friedow, Blankenship, Green, & Stroup, 2012), which have been incorporated in the present module. For example, module content was

divided into three sections: "Environments and Communities", "Globalisation and Work" and "Culture and Being", providing opportunities for the exploration of public health issues from diverse perspectives. In addition, the focus on student-led seminars and essays, which emphasised the application of concepts to case studies or real-world contexts, helped further students' understanding of the social determinants of health.

III. ASSESSMENT AND PEDAGOGICAL APPROACHES

The module's teaching and learning approach was anchored in three main principles – constructivism, critical thinking and questioning, and experiential learning.

A. Constructivism

Constructivism, as a learning theory, posits that individuals engage in meaning-making through interactions between new and their pre-existing knowledge (Piaget, 1971). Each lesson began with a student seminar exploring a guiding question related to the week's topic, followed by a lecture. Students were given an opportunity to construct their own understandings of the topics based on the assigned readings and compare these interpretations to those of the teacher. In addition, as part of individual written assessment, the Op-Ed and reflective essays further built on the constructivist approach by enabling students to formulate and defend their own judgments in response to other author's arguments in the Op-Ed essay, as well as

synthesising content meaningfully for the reflective essay.

B. Experiential Learning

Experiential learning, which emphasises the role of engagement with real-life experiences and consequences for learning (Kolb, 1984), was also a key feature of the course. To encourage preliminary insights into the necessity for experiential learning in the understanding of social determinants of health, guest speakers such as academics, non-governmental organisation representatives, researchers and even Traditional Chinese Medicine practitioners provided students with first-hand insight into their work and the social contexts of health in Singapore and beyond. The end-of-semester fieldwork project was also an opportunity for students to apply concepts in a relevant way by exploring how social determinants implicated health outcomes for a chosen community in Singapore.

C. Critical Thinking and Questioning

Critical thinking and questioning was an approach that undergirded the conduct of lessons, as well as the different modes of assessment in the module. Bloom's Taxonomy (1956), for example, was used to scaffold questioning in teacher-led discussions and student seminar presentations. Particularly, in presenting their

fieldwork projects, students were also assessed on the types of questions they fielded to presenting groups and the ability to defend their own arguments. Students were tasked with the responsibility of driving the process of class discussions, with the teacher only playing the role of a facilitator.

IV. REFLECTIONS ON COURSE EFFECTIVENESS

Both quantitative and qualitative feedback were obtained from students following the end of the course. Of the 73 students who had taken the course and were invited to provide feedback, a total of 32 students responded (43.8% response rate). Quantitative feedback focused largely on the effectiveness of the course instructors and did not yield rich insights into the effectiveness of the course relative to the qualitative feedback, and thus are omitted here. Qualitatively, students were asked to provide feedback on what they felt were positive aspects of learning in the course. Thematic analysis of the qualitative feedback generated three specific areas where students felt they were positively impacted; firstly, opportunities for creative thinking via assessment methods were favourable; secondly, real-world application of content helped to sharpen knowledge, skills, values; and lastly, flexibility in assessment and choice of topics engaged students more. A summary of these themes and corresponding quotes may be found in Table 1.

Themes	Corresponding quotes
Opportunities for creative thinking via assessment methods were favourable	<i>"Creativity as a point of marking for presentations, I feel that it stretched our brains and allowed me to think out of the box."</i>
Real-world application of content helped to sharpen knowledge, skills, values	<i>"Raised my social awareness of many issues... applicable to our daily lives." "Something about health we can share with family and friends..."</i>
Flexibility in assessment and choice of topics engaged students more	<i>"Seminar-style... presentations were interesting..." "The module is interesting because it allowed me to explore various aspects of health."</i>

Table 1. Themes and corresponding quotes from qualitative responses as positive feedback on design, pedagogy and assessment of the course

V. CONCLUSION

Social Determinants of Health is establishing itself as a popular course amongst undergraduates from different backgrounds. This stems from the constructivist approach that has informed course design, as well as opportunities for critical thinking and questioning, and authentic experiences in teaching, learning and assessment. It is envisioned that by making more disciplinary connections and scaffolding critical thinking and communication throughout the module, the course will continue to enrich the learning experiences of undergraduates from an even more diverse range of specialisations.

Notes on Contributors

Julian Azfar is currently an instructor at the Saw Swee Hock School of Public Health. He teaches courses related to the health humanities and is interested in using interdisciplinary curricula to promote critical thinking, perspective-taking and an appreciation of diversity in his courses.

Rayner Kay Jin Tan is a PhD student at the Saw Swee Hock School of Public Health. He has assisted in the planning and teaching of *Social Determinants of Health* and has been a key facilitator of learning activities throughout the entire duration of the course.

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Declaration of Interest

The authors confirm that the manuscript is original work of authors which has not been previously published or under review with another journal. The authors confirm that all research meets legal and ethical guidelines and that all possible conflict of interest for this paper has been explicitly stated even if there is none. The authors are not using third-party material that requires formal permission.

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