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Editorial: Interdisciplinary or interprofessional learning as catalyst of change in healthcare and higher education

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Editorial on the Research Topic

[Interdisciplinary or interprofessional learning as catalyst of change in healthcare and higher education](#)

In today's rapidly changing world, marked by technological shifts, global interactions, population movements, social conflicts, and persistent humanitarian crises, there is a heightened focus on interdisciplinary and interprofessional education (Abbasi Abianeh et al., 2022; Zhan and Niu, 2023). Yet, interdisciplinary education, defined as multiple collaborating academic fields, and interprofessional education, which involve students from different healthcare disciplines working together in training (World Health Organization, 2010), remain ambiguous (van Diggele et al., 2020) education pedagogies within higher education. With limited studies on the global impact of innovative collaborative pedagogies within higher education and healthcare education, this Research Topic was necessary. We also saw this Research Topic as a "catalyst of change"; a change that can engage, communicate, and coordinate with stakeholders; bringing them successfully along the transformation journey.

We asked authors to describe how they developed and tested new collaborative teaching programs that bring together different fields and professional groups in healthcare and education. We were especially interested in articles that showed how collaborative teaching methods can help global higher and educators, students and leaders prepare for future challenges.

To ensure the quality of the selected articles, we created a careful review process to enhance their impact. The four-step process is briefly depicted in Figure 1. We first screened the abstracts and redirected those that did not match the criteria to other educational topics. For the selected studies, we provided 2–4 rounds of constructive feedback to help the authors improve the impact of their study through careful revisions. We adopted a transparent process for documentation, and our final decision was always a committee's decision.

The accepted five articles presented innovative interdisciplinary or interprofessional education approaches along the continuum of secondary, college, professional education and practice to the global education and healthcare fields. We summarized each article below.

Ikävälko et al. used a Problem-Based Learning [PBL] course to bridge the gap between upper secondary and higher education which served as a pedagogical catalyst of change. This article particularly highlighted an innovative interdisciplinary approach for pre-service teachers interested in teaching science education at the secondary level and for secondary students interested in it. It illustrated the interdisciplinary nature with multidisciplinary group of the pre-service teachers; creating Global Challenges upper secondary course over a university semester. The upper secondary students received the University-student created Global Challenges course in 6 weeks with multiple collaborative pedagogies. Both the university and upper secondary students were surveyed to assess the impact of the experiences on their learning and themes were summarized in the article.

Phillips et al.'s article presented Community colleges, which serve a substantial percentage of students in the United States. They presented an innovative Science, Technology, Engineering, and Mathematics [STEM] education program—a day-long, cross-disciplinary experiential learning event to increase community college students' awareness of accessible applied mathematics disciplines and future career options. Experiential learning is a high-impact pedagogical practice whereby knowledge is created through the transformation of experience; helping students make connections between the material being learned and workforce skills; increasing engagement with mathematics and science to improve attitudes toward mathematics and science content and careers. This study described an annual one-day

event that promoted collaboration of 10 separate disciplines; three campus partnerships, and six community partnerships to create over 25 interactive exhibits around the central theme of math and forensics. Best practices were shared to help other higher education institutions to replicate this innovation in their context.

Sujir et al. highlighted a new model of interprofessional education [IPE] offered to Indian dental students during their internship. These students, acquainted with considerable clinical knowledge, would have attained readiness to master additional competencies and empower their complex clinical practices. The elective course accentuated the importance of backward thinking to enhance competencies not achieved through a regular curriculum. The needs assessment surveys vetted competencies were narrowed down to: (1) Business Management, (2) finance, (3) marketing, (4) human resource management, (5) patient management, (6) instrument and equipment purchase and maintenance, (7) clinic design, (8) legal aspects, (9) ethics. This model engaged dental practitioners, dental educators, business experts, lawyers, bioethicists, engineers, and architects to teach practice management education through IP collaboration perfectly timed to the start point of clinical practice. The course outcome also utilized important indicators that were pivotal to each competency, and the program evaluation was collected both from participating students and practitioners to cover different feedback facets.

Bahattab et al. plotted the frequent, prolonged, and severe humanitarian crises, affecting 1 in every 23 people today, with

PHASES OF THE TOPIC PEER REVIEW

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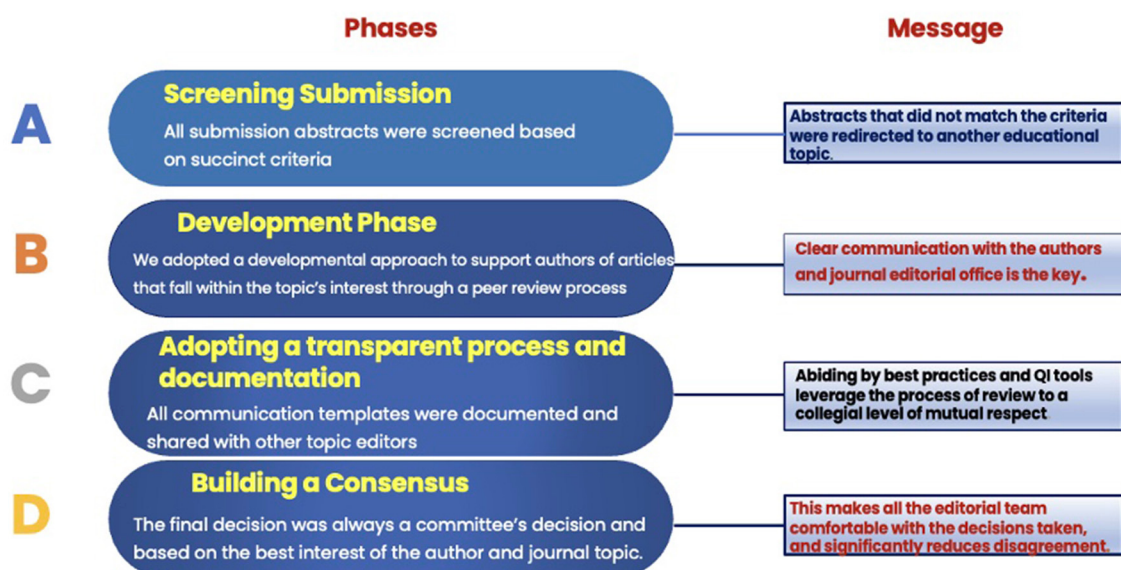


FIGURE 1 Milestones of the topic; from article selection to article publication.

an increasing demand for the professionalization of humanitarian health education and training. Bahattab et al. conducted a rigorous scoping review guided by the Joanna Briggs Institute methodology for scoping reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews. Their qualitative content analysis of 32 included studies revealed several new directions for the field to evolve. These included (1) adapting to interdisciplinary and collaborative partnerships, (2) prioritizing the training of local staff through regional centers, local leadership, and (3) providing accessible e-learning, including e-simulation. The review identified trends in humanitarian health education and training over the last decade. It also illustrated how systematic scoping review methodology can be used to conduct a useful overview of the field and generate findings that can stimulate future research and training development.

Bizarria et al. conducted a narrative literature review to discuss the urgency of curricularization of cross-cultural management in higher education institutions in Brazil. They posit that the increase in digitalization, globalization, mobility, and polarization have ignited this sense of urgency. The review foregrounded studies on cross-cultural management across various industries (e.g., business, healthcare, technology, etc.) and countries/regions of the world. Their thematic analysis revealed the trends of: (i) digital transformation and virtual education; (ii) learning, connectivism and formative experience; (iii) knowledge management and communities of practice; and (iv) conflict management. They concluded that the field needs to embrace intercultural sensitivity as an essential skill for leading global teams. This is especially important in times of polarization, when intolerance of differences has proven challenging. Leaders should reflect with openness and empathy on the different worldviews and paradigms of cross-cultural management.

Conclusion

Each of these articles illustrates how interdisciplinary and interprofessional education pedagogy could be applied to the global higher education or healthcare fields. While each of these studies have different limitations, as a collection, they illustrate new ways of teaching and training that can bring

together different fields and professional groups in healthcare and education.

Author contributions

NG: Conceptualization, Data curation, Methodology, Project administration, Resources, Visualization, Writing – original draft, Writing – review & editing. DQ: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Visualization, Writing – original draft, Writing – review & editing. AW: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Visualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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