COMMENTARY

Teaching and learning community medicine during the pandemic and beyond: Interactivity as an essential process

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ABSTRACT

Medical educators are restricted by the current pandemic in teaching community medicine. Although medical schools suspended the exposure of their students to real community settings, many community medicine educators advocate that learning in community medicine could be sustained during the pandemic as initially experienced in several medical schools in the Philippines. To maximize learning, it is essential to highlight interactivity as an important process in students' learning in whatever mode of delivery. This commentary focuses on the various forms of interactivities in teaching community medicine: student-to-student, student-to-community, and student-to-teacher. It is suggested that the interactivity between the student and the teacher should be emphasized to address the potential limitations of the other forms.

Keywords: *Academic dialogue, community engagement, COVID-19, medical students, reflection*

Introduction

Teaching and learning community medicine during the pandemic and beyond

In the past few months of the COVID-19 pandemic, medical educators grappled to modify their academic courses to address the limitations in teaching as brought about by this pandemic. Medical schools and allied health educational institutions in the Philippines and elsewhere suspended the exposure of their students to the community setting to mitigate the risk of COVID-19 transmission. Many have resorted to the online delivery of community medicine topics. Other institutions have developed simulated communities and other online infrastructures to teach and learn in this medical subspecialty. These are important adaptations to ensure the continuous learning of medical students about community medicine.

However, whatever delivery mode community medicine is taught, interactivity should always be highlighted to facilitate effective learning. In this paper, the concept of interactivity will be discussed that happens in at least three forms within community medicine.

Describing interactivity

Most authors on interactivity have explored this concept in relation to interaction in human communication. Others have focused on human interaction through computer-mediated communication. From a sociological perspective, interactivity is described as a relationship that involves mutual adaptation of actions and behaviors of two or more individuals [1]. These conceptualizations are pertinent to teaching community medicine.

A description of interactivity that is more relevant to teaching community medicine was presented by Wong *et al*. [2] and Laurillard [3]. They refer to learning that happens when the learner enters an academic dialogue with others. "Others" here may mean the teacher, fellow students or any individuals. It is only through this dialogue where students clarify their understanding of the new concepts presented to them by receiving feedback from others [3].

In teaching community medicine, interactivity can happen in at least three forms: student-to-community, student-to-teacher, and student-to-student. It has been pointed out that our current state of knowledge and patterns of practice result from interactions with our teachers and colleagues [4]. This implies that the process of interactivity in these three forms may bring about learning the concepts, processes, and principles of community medicine.

Interactivity as an important process in teaching community medicine

Student-to-community. This interactivity is consistent with community engagement. Well-engaged students with the community are more likely to learn about community medicine. During the pre-pandemic period, many community medicine educators always emphasize maximizing the opportunities of students' community exposures by effectively interacting with community members. This may include discussions with community members during home visits on issues that affect community health such as the social determinants of health. Through such activities, students can learn about community medicine as they are exposed to the health system as experienced by community members.

However, student-to-community interactivity may not be possible during pandemic where social distancing is necessary and lockdown-related policies are in place. Despite this situation, several community medicine educators advocate that students should have continued connection with community members. Similarly, educators are urged to be innovative in the delivery of education during this pandemic to adapt to the new reality [5]. Connection with community members are now commonly done through computer-mediated communications such as real-time video conferencing, Facebook group chat, and telephone call with community leaders. Other community medicine educators provide students with videos and use Google Maps to present the situation of the community immersion sites. These are helpful for students learning, but supplementary activities with more interactions may enhance student's engagement. Further, the current issue affecting the community should be given priority to be responsive to their needs that may encourage community participation. For example, some groups of medical students facilitate donations to communities for COVID-19 prevention and control. Others conduct online community education on COVID-19.

Student-to-teacher. A good student-to-community interactivity may not be enough to maximize learning. The interactivity between the student and teacher is essential. This comes in the form of faculty feedback on students' experiences, such as during preceptorial or tutorial sessions. However, feedback from the teacher must easily be interpreted by the student in relation to the goal [3]. For example, rather than providing feedback such as, “very good” or “great job” for a community plan developed by the students, it is more meaningful to them if the feedback is something like: “by involving the community leaders in developing the community plan, there is a high possibility for an effective implementation”.

In the delivery of community medicine topics, it is a common expectation that teachers should engage their students in the teaching process. Though it is recognized that there are many challenges for teachers to abruptly shift to online teaching, measures to encourage interaction between the students and teachers should be adopted. Consistently, Seymour-Walsh *et al*. [6] suggest that students' engagement minimizes distractions which is enormous in an online environment, thus, facilitate students' focus to the contents and eventually achieve better learning. It is essential that in every academic dialogue, students should be encouraged to think and reflect on their experiences. Knowledge is built individually by a learner and may not necessarily transmitted from the teacher to the learner [5].

Student-to-student. This form of interactivity is related to the dynamics of group work as an approach to teaching. As a common experience in every community medicine rotation, students are formed into groups to work on community-related activities and projects. The interaction and collaboration within the group facilitate understanding and clarification of ideas that contribute to learning among students. Learning ensues in group work as students develop skills in interacting, negotiating, and leading others [7]. Online group work is also becoming common in planning and implementing community activities as facilitated by various online collaborative platforms. Online interaction among students about their community experiences may contribute to learning. For instance, the sharing of community experiences of students through blog and Twitter provided students an opportunity to comment on and give feedback to each other's posts. This is consistent with a study finding that showed blogging supports peer-to-peer learning as it encouraged students to be engaged with each other and allows critical reflection of one's assumptions [8].

Highlighting the student-to-teacher interactivity

It is not automatic that the practice of interactivity will always result to desired learning outcomes. In some instances, interactivity may generate negative results. Similarly, Laurillard [3] is not confident that mere interaction and dialogue will always bring about effective learning. The academic dialogue that happens between the students, and the students with community members may sometimes lead to discouragement and frustration if the community experiences are unsatisfactory. Students' group work may have some challenges as it entails learning new sets of cognitive and social skills. In several instances, group members have disagreements and some are uncooperative. Such students' experiences are not conducive to create positive attitude towards community health. How should

negative community experiences be positivized to achieve effective learning? In distance education, Trentin [9] argues that to achieve quality, it is necessary to look at the interrelationships of factors affecting effective learning. In this regard, one way to enhance the quality of learning through interactivity in teaching community medicine is to consistently link the student-to-teacher interactivity with the other two forms. To draw insights from both negative and positive experiences of student-to-student and student-to-community interactivities, these experiences should be processed within the student-to-teacher interactivity. Through this interactivity, community experiences could be elevated to a better understanding of community principles by letting students critically think about their perspectives or looking at the experiences in a different angle. The role of student-to-teacher interactivity is essential to draw lessons from these experiences. This is consistent with Laurillard's [3] idea that the teacher's role is "to mediate the student-world relationship and ensure that it can change over time to the direction of desired outcome". Similarly, many authors on community-based medical education emphasized the importance of conducting reflection session as an essential process in learning about community health, e.g. Pagatpatan *et al.* [10]. Students need to be guided in understanding community processes and conditions. Community medicine educators must give prime importance in the processing of the student's experiences whether learning activities are delivered online or in real community environments.

An example of a guide in processing students' experiences is the "Articulated Learning" [11]. This is structured with guide questions: "What did I learn?", "How specifically did I learn it?", "Why does this learning matters", and "In what ways will I use this learning?. These questions could be modified to fit the student circumstances and experiences.

Lastly, there are several contextual conditions that should be considered to facilitate interactivity such as the quality of faculty training, students' preparation and behavior, administrative and community-related support. These are circumstances wherein interactivity may be facilitated that need further exploration.

Conclusion

Community medicine educators and students should always find avenues that allow students to enter an academic dialogue with others for them to effectively learn about community medicine whether teaching and learning happen in real community setting or virtually. Interactivity should always be highlighted in teaching community medicine that comes in at least three forms: student-to-community, student-to-student, and student-to-teacher with the prime consideration of the student-to-teacher interactivity.

These three forms of interactivities are essential in the pre-pandemic, pandemic, and post-pandemic periods. Interactivity is possible even in difficult times and non-negotiable in teaching students about community medicine.

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