COLLABORATIVE LEARNING NEEDED FOR HEALTHCARE MANAGEMENT EDUCATION

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Abstract

Healthcare leaders have a significant role in leading their organizations effectively and efficiently. They identify significant challenges in the external environment, strengthen the capacities of their organizations, and guide transformational change. In the United States, healthcare has been in a state of unceasing change because of healthcare reform, changing patient expectations, shortage in the workforce, advancement in medical technology, and unexpected business disruptions in the past decade. The continual and increasingly rapid change in the healthcare landscape requires a new type of healthcare leader with unique skill sets. In response to this emerging demand, healthcare management programs need to adopt a new learning module for training healthcare managers and leaders if the 21st century. Collaborative learning provides learners the opportunity to cultivate teamwork, communication, critical thinking, and problem-solving skills. It is recommended that healthcare management programs incorporate collaborative learning into their curriculum to equip future leaders with needed knowledge, skills, and competencies to guide their organizations toward a successful journey.

Keywords: case scenario, collaborative learning, critical thinking, problem-solving

1. Introduction

Today's healthcare marketplace is changing rapidly. Traditions are challenged, and underlying operating assumptions are questioned (Rubino, Esparza, and Chassiakos, 2018; Walston, 2017). Even though no one has a crystal ball that can predict how healthcare in the United States will develop in the next decade, it is undeniable that the healthcare industry has already faced transformational changes and uncertainty in the past decade (Rubino et al., 2018). Healthcare organizations comprise a system of processes, people, and other resources that must be led effectively and efficiently to accomplish the anticipated outcome of high-quality and safe patient care (Walston, 2017). Healthcare leaders are responsible for evaluating, planning, organizing, and coordinating needed resources to maximize operational efficiency and effectiveness (Rubino et al., 2018). In an era of unsurpassed innovation and business disruption, it calls for the new healthcare leadership; the leaders could identify major changes in the external environment, act promptly to commit resources to proper courses of action, and guide the healthcare professionals to deliver high-quality, cost-effective care in the growing complexity of healthcare delivery system (Rubino et al., 2018; Walston, 2017).

In response to the changing healthcare landscape, the Commission on Accreditation of Healthcare Management Education (CAHME) that accredits graduate healthcare management programs in the United States and Canada has updated its accreditation criteria (Schulte, Coyne, West, and Garman, 2015). CAHME-accredited institutions must actively implement CAHME

standards (Commission on Accreditation of Healthcare Management Education, 2020). The institutions must employ 21st-century pedagogical design in their programs (Commission on Accreditation of Healthcare Management Education, 2020). The institutions are required to ensure that learners will be proficient in the key competencies concerning healthcare principles and practice, communication, interpersonal effectiveness, analysis and problem solving, management and leadership, professionalism, and ethics (Beauvais, et al., 2019; Dominquez, Garcia, and LaFrance, 2013). Healthcare employers also expect that once graduates of CAHME-accredited institutions enter the workforce, they will be equipped with the skills and knowledge to undertake the challenges and innovations of the 21st-century healthcare (Beauvais, et al., 2019). Graduates from these programs are demanded to communicate clearly, manage change, work on a diverse team, understand failure and its causes, investigate problems, as well as find solutions through processes and organizational innovations (Dominquez et al., 2013; Schulte et al., 2015). Based on the author's years of experience as a healthcare management educator, healthcare management education is at crossroads. To change this, educational institutions and educators need to transform how future healthcare leaders are educated. In response to the accreditation requirements and employers' needs, healthcare management programs have increasingly integrated collaborative learning in the curricula (Dominquez et al., 2013).

Therefore, this article is arranged as follows. First, the introduction highlights the importance of collaborative learning in healthcare management education. Second, this paper will review available literature pertaining to the notion of collaborative learning. Third, this paper will present the benefits of collaborative learning, including communication, teamwork, critical thinking, and problem-solving skills. Fourth, barriers to collaborative learning will be discussed. Fifth, five critical principles for productive collaborative learning will be offered. The sixth section will include important guidelines to design collaborative learning activities in healthcare management education. In conclusion, the author reiterates the significance of collaborative learning in healthcare management education.

2. What is Collaborative Learning?
Collaborative learning is a pedagogical methodology to instructing and learning that comprises learners in groups working together to solve an issue or problem, accomplish a task, or create a product (Laal and Ghodsi, 2012; Loes and Pascarella, 2017). Learners must evaluate problems, think creatively and critically, and make the decision as a team (Kima and Lim, 2018; Naujokaitiene and Passey, 2019; Wilkins, 2018). In the working team, students are required to collaborate with their team members, search for the necessary information for the assigned project, and evaluate the findings collectively (Borokhovski, Bernard, Tamim, Schmid, and Sokolovskaya, 2016; Saqr, Fors, Tedre, and Nouri, 2018). While learning, students are held accountable for their own and each other's learning and make decisions on how they will work together and contribute to the creation of knowledge (Laal, Naseri, Laal, and Khattami-Kermanshahi, 2013; Naujokaitiene and Passey, 2019). The creation of novel information is often built on students' knowledge and experiences while working with their peers in the collaborative-learning process (Kima and Lim, 2018). Students develop knowledge and skills through shared learning; they do not learn in isolation and competition with others (Loes and Pascarella, 2017). Utilizing collaborative learning, students improve their comprehension of a

specific topic and assimilation of content knowledge through the collaborative investigation of realistic problems (Kima and Lim, 2018; Wilkins, 2018). Moreover, collaborative learning also provides students the opportunity to cultivate teamwork skills and see individual learning as fundamentally related to the success of team learning (Kima and Lim, 2018).

According to the social constructivist theory, learning is essentially a social phenomenon (Amineh and Asl, 2015). Vygotsky claimed that all cognitive functions initiate in social collaborations and the learning did not merely encompass the acquisition of new knowledge by pupils; rather, it is an active progression that knowledge is constructed, and learners have formed a knowledge community (Naujokaitieneand Passey, 2019; Vygotsky, 1978). Moreover, Vygotsky believed that knowledge is not simply constructed; it is co-constructed (Naujokaitiene and Passey, 2019). Knowledge building is based on individual experiences and the continual testing of hypotheses (Amineh and Asl, 2015; Vygotsky, 1978). Moreover, the learners' cultural and social contexts also have a critical role in collaborative learning (Amineh and Asl, 2015). Because of the differences in experience and cultural background, each student might exhibit a distinctive interpretation of information and construction of the knowledge process. Based on the unique assumptions in relation to learning and knowledge acquisition, social constructivism learning emphasizes authentic tasks in a meaningful context instead of abstract instruction (Amineh and Asl, 2015). Social constructivism learning encourages collaborative assimilation of knowledge through social cooperation, not the competition among learners (Naujokaitiene and Passey, 2019). Social constructivism learning provides real-world settings for case scenarios, instead of predetermined sequences of instruction. Social constructivism learning promotes thoughtful reflection on experiences (Amineh and Asl, 2015; Naujokaitiene and Passey, 2019). Thus, meaningful collaborative learning occurs while individual students are engaged in social interaction and collaboration.

3. Benefits of Collaborative Learning
Collaborative learning has been recognized as a practical instructional approach in higher education (Loes and Pascarella, 2017). A growing body of evidence generated from various empirical research studies has shown countless benefits of collaborative learning in the classrooms (Borokhovski et al., 2016; Kima and Lim, 2018; Laal et al., 2013). Among those benefits, advanced communication skills, enhanced teamwork, improved problem-solving, and higher-order critical thinking skills are imperative to healthcare management education.

3.1 Communication and Teamwork
Teamwork is crucial to delivering patient-centered care. A group of healthcare professionals' ability to work together has often been associated with improved outcomes and reduced costs (Walston, 2017). Teamwork in a healthcare organization will eventually make the patient care better and the working environment more enjoyable (Walston, 2017), which can be achieved through interdependent collaboration, open communication, and shared decision-making.

Working effectively in and as a team is a skill that can be learned and developed (Kima and Lim, 2018). Collaborative learning requires students to develop teamwork skills and learn from each other (Naujokaitiene and Passey, 2019), which are essential skills needed in healthcare organizations (Walston, 2017). In collaborative learning, a team is hypothesized as a social

system that team members shape and moderate each other's learning (Kima and Lim, 2018). The management of teamwork is oriented toward the team's common objectives and shared responsibilities (Kima and Lim, 2018; Naujokaitiene and Passey, 2019). The vibrant interplay of individual and social components influences successful collaboration in team learning. In collaborative learning, students can learn how tasks and responsibilities are delegated. Each student is assigned a specific task with a defined timeframe to complete that will be a part of the entire team project (Naujokaitiene and Passey, 2019). This assignment enables students to learn specific responsibilities while giving them a clear understanding of the overall requirements of the team project (Kima and Lim, 2018). As the project progresses, students collaborate and learn from their teammates' strengths and weaknesses (Naujokaitiene and Passey, 2019). In the real world, individuals cannot work together in harmony if they do not have such social skills. By engaging in collaborative learning, students develop essential interpersonal and teamwork skills; students are prepared to deal with the real-world situations; students learn how to interact and cooperate to work together as a successful and high-functioning team.

3.2 Critical Thinking and Problem-Solving Skills
Lately, the U.S. healthcare industry has experienced intensive challenges than ever before. Healthcare reform, nursing shortage, consumerism, innovative medical technology, and demands for quality care with lower costs have profoundly influenced healthcare organizations' daily operations. Especially the COVID-19 pandemic has disrupted the spectrum of healthcare delivery and brought unprecedented strain on healthcare organizations in an unimaginable and unexpected way. Facing with the internal and external constraints, healthcare leaders must effectively analyze problems and make the best decisions for each situation (Rubino et al., 2018). Critical thinking and problem-solving skills are vital because they help healthcare leaders identify problems, develop solutions, and create new ideas (Dominquez et al., 2013; Rubino et al., 2018; Walston, 2017). Healthcare leaders need to use their critical thoughts to approach work-related problems and resolve conflicts between or among employees (Walston, 2017).

Critical thinking comprises a variety of higher-order abilities that are indispensable to identifying issues with reasoning, creating inferences on why the issue exists and how it can be solved, collecting and organizing the pertinent information, and deducing conclusions (Loes and Pascarella, 2017). Good critical thinkers have the capability of drawing reasonable conclusions from information, making logical connections between ideas, and discerning useful and less useful details to solve problems or make decisions (Loes and Pascarella, 2017; Xie, Hensley, Law, and Sun, 2019). A research base suggests that collaborative learning could help learners expand their cognitive development, critical thinking, and problem-solving skills (Laal and Ghodsi, 2012; Loes and Pascarella, 2017; Xie, 2019).

In collaborative learning, learners work together to discuss the question under investigation. Learners utilize critical thinking approaches when they relate materials to new contexts or critically evaluate their learning. The use of such strategies also manifests cognitive engagement with the content (Xie, 2019). The process of critical-thinking and problem-solving is thought to occur when an individual student is exposed to other team members' the intellectual diversity as they are confronted with innovative or different ways of examining problems (Loes and Pascarella, 2017). The learning occurs throughout the transfer of skills by watching others in

action and cooperative problem-solving, questioning assumptions, and reviewing solutions as a team. As the process proceeds, students are developing effective problem-solving skills by verbalizing their ideas, receiving instant comments from their teammates or the instructor, as well as responding to questions and feedback (Laal and Ghodsi, 2012). Active social interaction and knowledge creation among team members make the team problem-solving comfortable and productive (Kima and Lim, 2018).

4. Barriers to Collaborative Learning

Working together does not automatically translate into collaboration. Communication problems, dysfunctional group dynamics, lack of preparation, insufficient social skills, logistical inconsistencies, and social loafing can contribute to negative tendencies toward working in collaborative learning teams (Bernier and Stenstrom, 2016; Saqr et al., 2018). As indicated in literature and observed in the real-world situations, students do not like team assignments because they feel that teamwork is a source of stress and frustration (Bernier and Stenstrom, 2016; Kima and Lim, 2018). Students often express that they are working with teammates who have other or different objectives, which leads to conflict and anxiety among the team members (Bernier and Stenstrom, 2016). Other students are not happy with unfair rewards or punishments for different commitment (Bernier and Stenstrom, 2016). Moreover, this learning model's collaborative nature can add additional burdens to students when they are required to get involved in learning activities in cooperative efforts (Kima and Lim, 2018). The cognitive load that students suffer is another collaboration load when they cooperate with their peers. This additional collaboration burden frequently hinders the learning process and has negative influences on learning outcomes (Kima and Lim, 2018; Saqr et al., 2018).

5. Key Principles for Productive Collaborative Learning

Drawing on evidence from prior research and literature review, there are key principles for implementing productive collaborative learning.

5.1 Principle 1: Assigning A team Leader with Delineated Responsibilities

Since collaborative learning endeavors originate from socio-cognitive dogmas, the leadership role, which is an important social characteristic, could be vital to effective collaborative learning (Xie, 2019). To improve collaborative learning teams' effectiveness, the instructor should assign a team leader per team prior to the inception of this learning model (Lu, 2018). The assignment of leadership considerably affects the student leaders' engagement and self-regulation in the learning process (Xie, 2019). The findings from a previous study show that student leaders are actively engaged in the learning process by spending longer time in the online discussion boards, posting much more responses than their peers, and interacting with other team members in more various ways (Xie, 2019).

The team leader should be given clear directions on what needs to be done and be the point of contact between the instructor and the team (Kima and Lim, 2018; Lu, 2017). One of the team leader's key responsibilities is to guide the team members towards their common goals by incorporating the underlying elements of human and social interactions to encourage collaboration. Another critical responsibility of the team leader is to clarify all aspects of communication concerns, including the unspoken interpersonal issues (Lu, 2017; Lu, 2018). To

lead the successful collaborative learning team, the leader also needs to keep team members on track during the discussion by informing them about the to-do list and the due dates (Kima and Lim, 2018; Lu, 2018). Whenever it is necessary, the team leader should have the final say on major team decisions (Lu, 2017). By doing so, the team members will be motivated to work independently and interact with other members collaboratively.

5.2 Principle 2: Assigning Each Member to A specific Role, Task, and Responsibility in Small Groups
Coordinated work is done by the division of labor among team members, whereas collaboration comprises team members' mutual engagement in cooperative endeavors to work on the project collectively (Naujokaitiene and Passey, 2019). Conflicts and dysfunctional team dynamics can be reduced if the division of labor is articulated in collaborative learning. Role assignment generally results in a strong sense of responsibility for successful teamwork (Kima and Lim, 2018). All team members should be assigned to defined roles, tasks, and responsibilities, which will help equal contribution and participation among team members (Kima and Lim, 2018; Lu, 2017).

All team members should play an essential role in case scenarios and contribute to dialogues because they are purposely grouped into a team (Shaw, 2013). Role assignment can ensure that team members have a fair sense of the appropriate individual to address ascertained problems (Lu, 2017; Shaw, 2013). It is necessary that each member learns from other members who partake distinctive roles and, progressively, their understanding of needed tasks will be enhanced (Kima and Lim, 2018). When team members have the confidence in a task or responsibility that they oversee, the socially regulated collaborative learning is also improved (Kima and Lim, 2018). According to Kima and Lim (2018), those teams with more contributors demonstrate higher productivity and collectively shared regulation than those with fewer individuals contributing to collaborative teamwork.

As Shaw (2013) observed in his study, an increased number of individuals in a team is associated with a significant drop in team performance since a larger team size significantly diminishes the social context along with student engagement and further affects participation. A smaller group of 4 to 5 students, as Shaw suggested, has a higher participation rate and improved learning scores (Shaw, 2013). Another 6-year cohort study done by Lairamore and colleagues investigated the impact of group structure on the student knowledge acquisition (Lairamore et al., 2018). The findings suggest that a smaller group of professionals is more effective in participating and experiencing shared learning.

5.3 Principle 3: Encouraging Team Members to identify Potential Issues and Discussion Possible Solutions
Collaborative learning involves a process of building knowledge as a team (Naujokaitiene and Passey, 2019). The quality of the collaboration highly depends on how successfully a team copes with impending challenges (Laal and Ghodsi, 2012). Team challenges are inevitable during the process of collaborative learning, and the type of team project tasks often determines the degree of challenge (Naujokaitiene and Passey, 2019). The team needs to proactively detect possible

issues and challenges and discuss potential solutions to resolve such issues and challenges (Laal and Ghodsi, 2012).

Continuous discussions on possible issues help form shared knowledge structures, which results in mutual engagement with socially negotiated problems (Laal and Ghodsi, 2012). Furthermore, the discussion helps team members obtain a better understanding of the current problems state (Kima and Lim, 2018). It also enables team members to feel psychologically safe to be more exposed to issues and mistakes while working on a team project. The openness to issues and mistakes prompts team members to engage in the co-construction of knowledge because they care more about the contents and tasks in the project that they have to learn (Kima and Lim, 2018).

Helle, Tynjälä, and Olkinuora (2006) contended that searching for solutions in students' individual approaches facilitates them to prepare for subsequent problem-solving abilities. Discussing possible solutions can provoke team members to participate in teamwork because the active involvement of solutions has been deemed as a significant indicator of high-level regulation processes (Kima and Lim, 2018). Students are cooperating on a shared goal of coming up with the best solutions to solve the problems. Collective solution-seeking also fits into the nature of collaborative learning that underlines constructive search and inquiry.

5.4 Principle 4: Developing An Action Plan within a Team
The team needs to develop an action plan by which team members identify the actions or activities required to achieve the team objectives (Lu, 2018). A timeline should be established for accomplishing each action to ensure that team activities remain on schedule (Lu, 2017). Planning involves decisions on timelines and urgent tasks (Lu, 2018). Planning, monitoring, and evaluating are expected to execute, which also enables team members to share team awareness of team processes and content understanding (Kima and Lim, 2018).

Even though it is not explicitly mentioned, task prioritization is often deemed as a fundamental component of a project's process planning (Kima and Lim, 2018). Task prioritization is also important when the team must decide if there is any task needed to be further scrutinized for knowledge creation (Laal et al., 2013). De Backer, Van Keer, and Valcke (2015) believed that the teams would have to prioritize tasks while assigning tasks to all members, and a more vital task should be assigned to the member who has specified skills to undertake such a task. Once team members recognize critical tasks to be completed, they will exert more cognitive endeavors into those assigned tasks (Kima and Lim, 2018; Laal et al., 2013).

Task prioritization approaches are vital in collaborative learning as students have limited time to organize team processes. Once important tasks are prioritized, the project team will allocate limited resources in a better way (Kima and Lim, 2018). DiDonato highlighted (2011) that creating a collective comprehension of different team tasks should be followed by task prioritization. Team members also need to agree on the assigned tasks and timeline. If team members do not agree on what they should focus on, consequent communication may not generate efficient outcomes and efforts (Kima and Lim, 2018). Team members' collaborations on task-related matters enlarge teams' responsibilities for their collective learning outcomes.

5.5 Principle 5: Sustaining Instructor's Social Presence and Support Throughout the Process of Collaborative Learning

Collaborative learning is seen as a process of peer interaction mediated by the instructor (Kima and Lim, 2018). The instructor's social presence could motivate and encourage teams to build a sense of community (Lu, 2017). The instructor should promote purposeful engagement among independent learners (Saqr et al., 2018). The instructor can cultivate a safe and friendly learning environment where team members trust one another and respect others' ideas, contributions, and work (Lu, 2017). Subsequently, collaboration is engendered based upon sincere interdependence drawn upon a shared sense of purpose and a division of labor (Saqr et al., 2018).

The instructor should be a facilitator of learning processes (Naujokaitiene and Passey, 2019). The instructor should monitor team progress and facilitate the learning process even though he/she cannot participate in the entire discussion among all teams. The instructor's efforts will engender cognitive conflicts, social collaboration, and disequilibrium in team members, which stimulates intellectual growth and cognitive development (Loes and Pascarella, 2017). Such a mechanism is needed for the efficiency of collaboration (Kima and Lim, 2018; Saqr et al., 2018). Positive collaborative learning experiences are often generated from the instructor's monitoring and facilitation capacity (Saqr et al., 2018).

The instructor should promptly respond to team members' questions and provide guidance or assistance. Immediate feedback provided by the instructor may address the misconception of members, if any, thereby consolidate and strengthen knowledge acquired (Mal and Suneel, 2019). Real-time feedback is also critical for reinforcing learners' focus on learning objectives (Naujokaitiene and Passey, 2019). The instructor should also help resolve relationship conflict when team members need advice on their collaboration and concerns if they cannot resolve within the team (Lu, 2017). Finally, the instructor should be the center of resources (Lu, 2018). Once students gain better access to resources, emotional support, and educational assistance, they will be elevated with a strong sense of belongingness and motivation (Saqr et al., 2018).

6. Designing Collaborative Learning Activities

Collaborative activities can promote learning through authentic contexts and engage students by developing solutions to complicated problems (Laal et al., 2013). Collaborative activities can be designed to address any healthcare topic; however, it would be better to have a specific and limited focus. Linking learning activities to specific, authentic, and relevant real-world case scenarios can promote students' conscious perception of course materials' value, thus motivating students to actively engage in the process (Borokhovski et al., 2016). Additionally, it will help students build a more substantial base of knowledge on the topics discussed (Laal et al., 2013). When designing the collaborative activities, the instructor and course developers might also target subskills, for example, improving writing skills, building-specific vocabulary requirements, or working on a job-related skillset since communication is an essential skill for healthcare leaders (Laal et al., 2013).

Collaboration among team members is critical to effective learning. The collaborative assignments and exercises must be created in such a way to prompt interaction, promote peer teaching and learning, as well as uphold team learning and development (Laal et al., 2013; Lu, 2018). The assignments and exercises should be designed for the entire team and not divided into

parts for individual members (Laal et al., 2013). In addition, adequately utilized collaborative activities create a positive sense of competition among teams, with subsequent increases in individual motivation, satisfaction, and knowledge acquisition (Laal et al., 2013).

Well-designed collaborative activities are intended to foster a friendly atmosphere conducive to small group interactions, requiring each team member to participate in the process and contribute to a team project actively (Laal et al., 2013). Specific guidance to the case scenario should be provided to reduce unnecessary cognitive efforts in collaborative learning (Kima and Lim, 2018). Another prime reason for offering more specific guidance is to raise students' awareness that successful collaboration depends less on chance or random 'team chemistry' than on regularly performing specific procedures and skills (Bernier and Stenstrom, 2016). The sooner the students realize this important notion, the happier collaborations, and higher quality interactions will be seen shortly.

7. Conclusion

As the U.S. healthcare delivery services increasingly emphasize teamwork involving multiple healthcare professionals, healthcare leaders are indispensable to interprofessional care's success because they advocate the system-wide culture and structure for supporting effective interprofessional care (Begun, White, and Mosser, 2011). Healthcare reform, patient-centered care, and this interprofessional care movement—to name a few— call for changes in healthcare management education. To prepare tomorrow's healthcare leaders for leading a thriving organization, the healthcare management programs should shift from an instructor-centered model of education to a learner-centered model (Dominquez et al., 2013). Collaborative learning enables students to participate in real-world case scenarios through learning for knowledge construction and sharing. Students are advancing their communication, teamwork, critical thinking, and problem-solving skills throughout the collaborative learning process, which are needed for the 21st century healthcare movement.

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