Knowledge Sharing to Advance Health Workforce and System Development for the Public Good

By: Dr. William Burdick*

*MD, MSEd

Abstract

The development of a health workforce capable of meeting the needs of the public is a high global priority. The Network Towards Unity for Health, a non-state actor of the World Health Organization, delineates priority topics for global health teaching and learning that include social accountability, regional interprofessional education and collaborative care, and strengthening health worker education and training programs. TUFH's educational efforts, under the rubric of TUFH Academies, supplement formal learning institutions, support educators, and present growth opportunities for practitioners and policymakers outside those institutions. This strategy operates under the philosophy that active learning and the application of knowledge are operationalized by clearly stated objectives, realistic lesson plan design that encourages participant interaction, facilitation that models respect and bi-directional learning, and program evaluation that emphasizes ongoing feedback and response. We believe that exposing our TUFH Academy offerings, with their embedded philosophy and structure, to students and professionals will help strengthen the global health workforce and health systems to benefit the public we serve.

Introduction

The development of a health workforce capable of meeting the needs of the public is a high priority of The Network: Towards Unity for Health (TUFH). Workforce development is implicit in TUFH's 2021-23 Strategy, which delineates four goals: social accountability, regional interprofessional education and collaborative care, strengthening health worker education and training programs, and global health teaching and learning. Social accountability, interprofessional education, and collaborative care constitute major components of our course for health workforce educators, and our symposia tackle topics in global health. TUFH's educational efforts, under the rubric of TUFH Academies, supplement formal learning institutions, support educators, and present growth opportunities for practitioners and policymakers outside those institutions. Knowledge dissemination also occurs through the TUFH Annual Meeting, regional meetings, symposia, and workshops. We describe the philosophy and operational elements of the TUFH Academies and other TUFH capacity-building offerings in this paper.

Knowledge sharing through TUFH

TUFH Academies, which are all online, include the International Student Training and Exchange Program (iSTEP), Health Workforce Education for the Public Good (HWEPG), and TUFH Symposia and Workshops. iSTEP is aimed at students from all disciplines connected to wellness - mainly those in the health professions, but also those in social work, economics, architecture, veterinary medicine, and engineering. HWEPG enrolls faculty members from these fields and focuses on the connection between educational institutions and the communities they serve, with courses in social accountability, interprofessional education and practice, appreciative inquiry, and leadership. Current iSTEP course offerings include Social Determinants of Health, Communication, and Innovative Cities and Health. Courses attract participants from around the globe and emphasize learner engagement through small group discussions and online discussion boards.

In addition to TUFH Academies, a mentoring program that pairs students with faculty or other professionals is available to TUFH members. A partnership with Northern Ontario School of Medicine is developing a program to build knowledge and skills of institutional leaders in social accountability, and a program of short asynchronous online modules is offered in collaboration with ScholarRx and the Pan American Health Organization.

Aims of health workforce and systems education

TUFH Academies carry a philosophy of application of knowledge and learner engagement. In 1929, Alfred North Whitehead wrote an essay entitled, The Aims of Education (Whitehead, 1929). While social assumptions and language in the essay reflect the period in which it was written, the main theses are relevant to TUFH's philosophy of knowledge dissemination. Whitehead asserts that a "merely knowledgeable man is the most useless creature on earth," indicating that the application of knowledge should be a central aim of education. Another Whitehead priority is connecting knowledge from different disciplines, for example, geometry and art. The ability to take information acquired in one discipline or setting and apply it in another is referred to as "transfer," a foundational concept in integrated learning (Donovan & Bransford, 2005) and one embraced by TUFH Academies.

Bi-directional exchange of information and active learning

Learner engagement is another cornerstone of our philosophy. TUFH Academies participants comprise individuals from different regions and different workforce streams and represent a range of ages and levels of experience. The strength of diverse groups learning together is enhanced when there is an opportunity for bi-directional learning realized through active engagement. Educational enterprises with experienced people working in different settings and with different professional backgrounds work best when the course logistics are structured for interaction, and a course culture emphasizes that everyone can contribute to the knowledge of all (Burdick, 2014).

In TUFH's work with practitioners, policymakers, and faculty, we adhere to the principles of adult learning (Zepeda et al., 2014). Bi-directional learning is an important part of adult learning, as are several other concepts. The culture of the "classroom" is at the core: respect for the knowledge that learners bring to the classroom, respect for their time, acknowledgment of commitments outside the classroom, and adaptation of information to their context. Delivery of formative feedback in a constructive manner is another manifestation of the classroom culture. These elements contribute to the culture of the classroom and help to build a community of learners who can support and learn from each other during and after the formal education program (Cruess et al., 2018).

The opportunity to apply knowledge through project conceptualization and implementation is a key motivator for all learners. It stimulates the connection between new and existing knowledge and between knowledge and practical realities. Projects are complex endeavors that engage many aspects of learned knowledge (Burdick et al., 2012; Gusic et al., 2010). This begins with conceptualization of the problem – a task that engages all stakeholders if the "right" problem is to be identified. Recognition of previous work in the field requires the application of information search strategies and critical thinking skills to sort the information. The design of innovative solutions requires the application of creativity principles, including appreciative inquiry (Sandars & Murdoch-Eaton, 2017) and positive deviance inquiry (Sternin & Choo, 2000). Implementing change necessitates the application of change management principles and communication skills. Evaluating projects requires the application of notions like "outcomes chains," indicators, data sources, and experimental design (Mennin et al., 2013). All of these elements of project work support our philosophy of applied knowledge.

Active learning is a key component of TUFH Academies, and the structure of our education programs facilitates interaction. A short framing lecture is usually followed by small groups discussing how the concepts can be applied in their settings or analyzing the balance between two competing principles. During the reporting period that follows, participants learn from each other, reflect on similarities or differences to their setting, and hear reflections from facilitators. The interaction in the live setting (online or in person) can be surrounded by asynchronous interactions on a learning platform. The evidence for the effectiveness of active learning is striking (Michael, 2006) - it helps learners construct and refine mental models, forge social networks for support, receive feedback, stimulate creativity (Robinson, 2012), and strengthen resilience (Burdick, 2015).

Logistics of knowledge-sharing experiences

Objectives

The structure of educational programs at TUFH supports this philosophy of application and active learning. A foundational element is the construction of behavioral, application-oriented objectives that avoid words like "understand" and "know" and emphasize action verbs like "design," "create," or "evaluate." Objectives are realistically limited in number so that they are achievable by the conclusion of the session or module. The process of writing objectives is often

iterative – framing, followed by lesson planning, followed by editing or pruning of objectives. If there is an assessment, it should be aligned with or even identical to the objectives.

Lesson plan (faculty guide)

The design of our sessions to achieve these objectives requires realistic time allocation. The basic model, organized in a lesson plan or "faculty guide," is comprised of short didactics interspersed with breakouts of small groups ranging from 3 to 8. The small groups can be self-managed or facilitated, but facilitated groups require a light touch so that attention is on participant interaction, not transfer of knowledge from the facilitator. Reports from small groups are at least as important as the small group discussion. Our structure embeds time for each group to present their ideas, followed by opportunities for cross-talk. The facilitator models a non-judgmental response ("thank you" is more useful than "great answer") while correcting misconceptions as needed. Facilitators can also emphasize bi-directional learning by modeling "I don't know" when relevant questions are asked. The opportunities for comments or questions from participants are enhanced by judicious use of silence – waiting 10 seconds may feel awkward, but it sends the message that the facilitator is genuinely interested in hearing from the group, and often, someone feels moved to respond.

There are many suggestions on the use of visual aids, but the simple advice is to keep it simple - 7 words per line, 7 lines per slide; at least 36pt heading and 24pt body font size. Less is more.

Creating the learning culture

Other structural elements help to create a supportive learning culture in the classroom, whether it is virtual or online. Learn the names that people want to be called, not just their formal names, and avoid titles. This is particularly important in a diverse classroom in which participants often start from a culture of stratified status. One tool to accomplish this is a small group activity in which participants ask each other three questions: what do your friends call you? What is one professional role, and what is one non-professional fun fact (that you are comfortable sharing)? The last is often the hardest for participants but leads to memorable details that enrich the knowledge about the others in the room. The intentional design of a learning environment can encourage creativity and learning (Robinson, 2012).

Leadership in workforce education

Leadership in workforce education implies empowering other educators to use tools that enrich education experiences. It encourages them to scan their environment for opportunities or imperatives for change and to work with stakeholders to refine and implement those opportunities. Processes that start with community consensus building about "the problem" are likely to be the most successful in design and implementation. Within the education community, leaders can facilitate the exploration of new ideas by allocating physical space and time for this

to occur and using the facilitation techniques applicable to the engagement of learners in their classrooms (Palmer, 1999).

Evaluation of the learning program

Evaluating our efforts in education requires planning and resources. Clearly, stated program objectives are an essential first step. Understanding how the intervention is expected to change people, policies, or practices can be visualized in the diagram of linked outcomes, also called an outcomes chain or one's theory of change. Debate and consensus about the outcome chain sometimes lead to modification of the intervention to increase the likelihood of change. Desired outcomes represent a series of if-then hypotheses, each potentially testable. These "intermediate metabolites" are more proximate to the intervention and can offer measures of success more aligned with the intervention and less influenced by externalities. Success is not the only metric – understanding why and how an intervention works can be as important. Output measures such as the number of participants or cost are frequently needed by stakeholders but should not supplant other measures.

The Kirkpatrick model for evaluation of training programs is often cited (Level 1: participant reaction, 2: change in knowledge or skill, 3: change in behavior, 4: impact) (Kirkpatrick, 2010). Unfortunately, most evaluations stop at level 1. Another model developed by Patton, called developmental evaluation, acknowledges the complexity of social interventions and emphasizes ongoing feedback loops to continuously collect and respond to data to make improvements (Patton, 2010). Many evaluation models exist – concepts and tools should be blended to give meaningful feedback to innovators and stakeholders.

Conclusions

TUFH Academies constitute a key element in our strategy for knowledge dissemination and support overall TUFH strategic goals. Their philosophy of active learning and application of knowledge is operationalized by clearly stated objectives, realistic lesson plan design that encourages participant interaction, facilitation that models respect and bi-directional learning, and program evaluation that emphasizes ongoing feedback and response. Leadership development empowers others to adapt this philosophy to their environment. We believe that exposing our TUFH Academies offerings, with their embedded philosophy and structure, to students and professionals will help strengthen the global health workforce and health systems to benefit the public we serve.

References

Burdick, W. P. (2014). Global Faculty Development: Lessons learned from the foundation for Advancement of International Medical Education and Research (FAIMER) Initiatives. In *Academic Medicine* (Vol. 89, Issue 8, pp. 1097–1099). https://doi.org/10.1097/ACM.0000000000000377

Burdick, W. P. (2015). Social networks (and more) are necessary for student and faculty resilience. In *Medical Education* (Vol. 49, Issue 1, pp. 17–19). https://doi.org/10.1111/medu.12607

Burdick, W. P., Friedman, S. R., & Diserens, D. (2012). Faculty development projects for international health professions educators: Vehicles for institutional change? *Medical Teacher*, *34*(1), 38–44. https://doi.org/10.3109/0142159X.2011.558538

Cruess, R. L., Cruess, S. R., & Steinert, Y. (2018). Medicine as a Community of Practice: Implications for Medical Education. In *Academic Medicine* (Vol. 93, Issue 2). https://doi.org/10.1097/ACM.0000000000001826

Donovan, M. S., & Bransford, J. D. (Eds.). (2005). *How Students Learn: History, Mathematics, and Science in the Classroom*. The National Academies Press. https://doi.org/10.17226/10126

Gusic, M. E., Milner, R. J., Tisdell, E. J., Taylor, E. W., Quillen, D. A., & Thorndyke, L. E. (2010). The Essential Value of Projects in Faculty Development. *Academic Medicine*, *85*(9), 1484–1491. https://doi.org/10.1097/ACM.0b013e3181eb4d17

Kirkpatrick, D. L. (2010). *Evaluating Human Relations Programs for Industrial Foremen and Supervisors*. CreateSpace Independent Publishing Platform.

Mennin, S., Kalishman, S., Eklund, M. A., Friedman, S., Morahan, P. S., & Burdick, W. (2013). Project-based faculty development by international health professions educators: Practical strategies. *Medical Teacher*, *35*(2). https://doi.org/10.3109/0142159X.2012.731096

Michael, J. (2006). Where's the evidence that active learning works? *Advances in Physiology Education*, *30*(4), 159–167. https://doi.org/10.1152/advan.00053.2006

Palmer, P. J. (1999). The Courage to Teach. *College Composition and Communication*. https://doi.org/10.2307/358975

Patton, M. Q. (2010). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*. Guilford press.

Robinson, K. (2012). *Out of our Minds*. John Wiley & Sons, Inc. https://doi.org/10.1002/9780857086549

Sandars, J., & Murdoch-Eaton, D. (2017). Appreciative inquiry in medical education. *Medical Teacher*, *39*(2), 123–127. https://doi.org/10.1080/0142159X.2017.1245852

Sternin, J., & Choo, R. (2000). The Power of Positive Deviancy. *Harvard Business Review*, *January-February*.

Whitehead, A. N. (1929). *The Aims of Education and Other Essays*. Macmillan.

Zepeda, S. J., Parylo, O., & Bengtson, E. (2014). Analyzing principal professional development practices through the lens of adult learning theory. *Professional Development in Education*, *40*(2), 295–315. https://doi.org/10.1080/19415257.2013.821667