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Chapter

Perspective Chapter: Strengthening and Empowering Professional Health Educators' Capacity and Practice

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Abstract

Professional health education practice includes supporting and building **health literacy skills** needed to promote individual and community health and address barriers that inhibit the attainment of health. Mitigating poor health outcomes is where health and education converge. The Social Determinants of Health underscore the role of community contexts and community-driven approaches to address health disparities and the role of empowering and activating communities to that end. A comprehensive and social justice approach to health education in school and community settings helps all people develop health-promoting skills and values and is critical to educational success. This chapter aims to examine professional practice and development for health educators from a social justice lens that includes addressing inequities in health, and a growth mindset where professionals learn, apply skills, evaluate beliefs that hinder equitable learning, reflect, and improve competency and self-efficacy. Methodologies that drive more forward-thinking approaches for supporting effective practice across the lifespan are explored. The Whole School Whole Community Whole Child model, the World Health Organization Health Promoting Schools, and Health Literacy Skills will be used to frame opportunities to consider health education and the bidirectional influences to reinforce and reimagine the connections between education and health.

Keywords: health education, health literacy, health equity, health, health educator

1. Introduction

This chapter will focus on how supporting the learning and health of children and youth everywhere is essential for improving health outcomes and quality of life across the lifespan. Healthy children and youth learn better, and healthy children and youth grow into healthy adults [1–3]. Approaches that address not only the student but families, the whole school, and the community positively impacts academic achievement and health status. Using multiple approaches to address health disparities linked with inequities in education increases the ability to make healthy decisions and use health information and services [4].

The authors of this chapter will use the following questions to share our perspective on the field of health education and how empowering educators' capacity and practice improves health outcomes and educational success.

- What kind of health education do children and youth want?

- What do we owe children and youth, and what commitment should they expect from the educational system including teachers, administrators, school boards, policymakers, parents, and community organizations?

- Regardless of the setting, what should a visitor see or look for if they were to stand in the doorway of a health education classroom or workshop?

These questions may cause some trepidation because health education should not look the same for all audiences. However, we believe there are some main ideas that should always be considered when planning and teaching health education to children and youth, and when providing professional development for health educators.

2. The intersection between health and education

Let us start with, what we owe children and youth and the commitment they should expect from the educational system. The intersection of health and education, profoundly impacts well-being and quality of life. Research has shown this powerful connection, that education leads to improved health [5–7]. A gain in personal control and an increase in agency are two outcomes of education that positively impact personal health [8]. Education, both a process and a product occur in formal and informal (outside the school) settings provides children and youth with the knowledge, skills, and capacity to be healthy and productive as young people and in adulthood [9].

Children and youth, throughout the world should expect a commitment to their overall health and well-being and learning success through a comprehensive and coordinated approach. Two frameworks, that provide this approach are the United States (US) Centers for Disease Control and Prevention's Whole School, Whole Community, Whole Child Framework (WSCC) [10]. The other is the World Health Organization's (WHO) Health Promoting Schools (HPS) [11]. Frameworks create a context for the work that allows for site specific application based on the needs of the school community.

The WSCC framework puts the student at the center and the school and community surround and support the students. This model is built on the role the community has in supporting the school, the link between health and academic success, and the need for evidence-based school policies and practices [10]. The framework centers around the five tenets of the Whole Child: healthy, safe, engaged, supported, and challenged. Schools play a critical role in supporting healthy behaviors in school children. It is easier to establish good health practices in children than to try to change unhealthy behaviors in adulthood [5]. The 10 components of the WSCC model are found in **Table 1** and they mirror the HPS efforts outlined by the WHO [10, 11]. The WHO introduced the concept of a health-promoting school, a whole school approach, over 25 years ago, and the principles are based on eight global standards, which are also found in **Table 1**. These principles posit that for educational systems to be truly

U.S. CDC Whole School, Whole Community, Whole Child Framework (WSCC)	WHO Health Promoting Schools Eight Global Standards (HPS Model)
Five Tenants – Each student:	Six Pillars:
1. Healthy. enters school healthy and learns about and practices a healthy lifestyle.	1. healthy school policies,
2. Safe. learns in an environment that is physically and emotionally safe for students and adults.	2. healthy physical school environments,
3. Engaged. is actively engaged in learning and is connected to the school and broader community.	3. healthy school social environments,
4. Supported. Has access to personalized learning and is supported by qualified, caring adults.	4. health skills, and education,
5. Challenged. Each student is challenged academically and prepared for success in college or further study and for employment.	5. links with parents and the school community
	6. access to school health services
Health education. "When provided by qualified, trained teachers, health education helps students acquire the knowledge, attitudes, and skills they need for making healthy decisions."	**School curriculum.** "The school curriculum supports physical, social–emotional and psychological aspects of student health and well-being." (Standard 5)
Nutrition environment and services. "School nutrition services provide students with opportunities to learn about and practice healthy eating."	
Physical education and physical activity. "Physical education helps students develop motor skills, knowledge, and behaviors."	
Health services. "School health services provide first aid, emergency care, and assessment of and planning for chronic conditions. In addition, services provide wellness promotion, referral to prevention services (such as HIV testing), and student and parent education. The services also ensure access or referrals to outside health care providers."	**School health services.** "All students have access to comprehensive school-based or school-linked health services that meet their physical, emotional, psychosocial, and educational health-care needs." (Standard 8)

Table 1.
A comparison of the US CDC whole school, whole community, whole child framework, and the WHO health promoting schools.

successful, they must commit to supporting and promoting the health and well-being of everyone linked to our schools including students, teachers, administrators, staff, and the community. In addition, there are bidirectional influences that impact health and well-being. For example, schools that have safe, supportive, and predictable environments are likely places where students report strong connections to staff and report that there are adults in the building who care about them.

In both the US and globally, the relationship between health and learning outcomes is being recognized more and more [11–13]. This became even more evident during the COVID-19 pandemic [14, 15]. Millions of children and youth shifted to online learning if they had the technology, and many were isolated from social, education, and supportive services and systems located in the schools. School closures, reliance on remote learning, learning loss, inequalities in educational systems, and mental health issues are examples of the impact the pandemic had on students' health and learning [16]. Healthy students are better learners and building capacity in schools for healthy living,

learning, and working benefits everyone. The COVID-19 pandemic revitalized the importance and commitment to the linkages between education and health including unmet mental health needs and limited or no access to services.

Let us explore the similarities between the US CDC WSCC model, and the WHO HP model. Both approaches include collaboration across many sectors and levels. Key school, public health, government, and community stakeholders and leaders at the local, state, and national levels work together to coordinate policies, operations, and practices that champion health and learning outcomes for all students [10, 11]. The aim of both models is cohesive and collaborative efforts that are strategically planned and implemented between health, government, and educational sectors, and engage community stakeholders in the process. What does this mean? There is better coordination and access to services for students and their families, opportunity to address social determinants of health, more efforts to build students' health knowledge and skills and an inclusive learning environment, and a commitment to working together to improve and support student health and well-being. Both models provide guidance for implementing and sustaining this approach. In **Table 1**, you will notice, some of the similarities and differences. The HPS approach separates out three standards on government and school policies and school governance and leadership, which are woven through the WSCC model and are found in each of the 10 components [10, 11]. Each component of the whole child is distinct yet interconnected. If a school is challenging and does not feel safe and supportive, every child will not be able to reach their full potential. Schools that provide safe and supportive environments without challenging curricula will risk perpetuating a bias of low expectations.

Research on the impact of HPS and the WSCC models reveal improvements in health and learning outcomes [12, 17–20]. Findings reported included improved measures of depression, bullying, violence, sexual health knowledge and beliefs around gender equity for secondary students, and school and social connectedness decreased risky healthy behaviors including drug use and had a positive impact on mental health [17, 18]. Incorporating the WSCC model had led to changes in several US states' health education practices and policies where student health is more at the center of the education system, there is more support from policymakers and administrators, and community health organizations collaborate with the educational system better [20]. Finally, both modules are built on increasing health literacy skills in students and the larger community. Advancing health literacy skills increase the capacity for making health-related decisions and actions for oneself and others [21].

2.1 Takeaways: what is the significance for health educators? How do we continue to build our skills and improve our practice?

Both the WSCC and HPS frameworks provide a comprehensive public health approach for school health that supports the development of health literacy. Both link policies, programs, and practices to ensure school environments are healthy, safe, and supportive for all students and staff. While the WSCC model is child centered with a macro focus, the HPS is systems oriented. The WSCC models inner circle demonstrates how policies, programs and practices are connected. Individually, both provide a useful framework to consider robust and comprehensive school health efforts. Collectively, they are powerful tools to ensure that systems, policies, practices, and programs meet the health and academic needs of all students. We (health educators) can drive change and improve the quality and impact of health education on individuals, families, and communities by ensuring that there is a commitment and

comprehensive approach to all health education efforts. This practice allows us to continue to learn about and reflect on, the value of incorporating components of national and global comprehensive models and determine if current policies, programs, and practices support health outcomes for all.

3. Health and health literacy

Health, a complex and multi-dimensional concept is built on behaviors that usually do not occur in a vacuum; and an array of variables influences one's health. There is no single consensus on the definition [22–24]. Establishing good health requires knowledge, skills, capacity, and resources at both the individual and community levels to support all the dimensions of health (physical, mental, social, political, economic, and spiritual) and remove the barriers to good health [23, 25]. Social determinants of health, the context in which people live, impacts health status and health outcomes. These determinants include a) health literacy skills and access to health care, b) educational attainment, c) where people live and work, d) job status, food security, and housing security, and e) a well-resourced healthy living environment (e.g., access to transportation, air, and water quality, safe neighborhoods) [26, 27]. Educational status has proven to be a predictor of health outcomes in the US and internationally [3, 25, 28].

Health literacy is an often-ignored social determinant of health [21]. This complex phenomenon focuses on providing individuals with the knowledge and skills to access and understand health information and services needed to make health-enhancing decisions for themselves, their family, and their community. Similar definitions of health literacy have been developed that provide further visualization of this concept and keywords used to define this term include confidence, empowerment, skills, a resource, and understanding of health messages [29–32]. Common to all these definitions is the expectation that health literacy means more than having knowledge or understanding of health content, but also enacting a healthy lifestyle by acting on knowledge and skills.

These skills are developed over a lifetime and enable individuals to use information gained for making well-informed decisions that lower health risks and promote quality of life [33]. Health education focused on health literacy not only helps children and youth adopt and maintain healthy behaviors, but they also learn to become self-regulated learners, critical thinkers, problem solvers, productive citizens, and effective communicators [34]. Further, leading with health literacy, within the WSCC framework highlights the importance of environments that support health enhancing behaviors. Health education programs need to be developed within the context of the whole school environment. Across the world, the development of health literacy skills in students improves health outcomes, reduces health risks, and increases academic success [35] Health literacy skills enable learners to "know and do."

The US federal government Healthy People 2030, health objectives for the nation recently updated the definition of health literacy for individuals and organizations [36]. Health literacy is the degree to which individuals can find, understand, and use information and services to inform health-related decisions and actions for themselves and others. Organizational health literacy is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others [37]. Acquisition of health literacy skills represents a shift away from health content

exclusively, to the development of skills to support healthy lifestyles inclusive of accessing scientifically accurate and developmentally appropriate health information.

Reading proficiency at the fourth-grade level is another Healthy People 2030 indicator. This measure underscores the importance of a literate population overall. Fourth grade reading proficiency includes the ability to comprehend and apply information. It is an important development point in the acquisition of literacy skills. Further children who struggle with fourth grade reading skills are more likely to struggle academically throughout their schooling. Youth who struggle academically are more likely to engage in risky behaviors. While, this relationship is not correlational, there is concordance across those domains [1].

The new definition of health literacy, emphasizing the use of health information from a public health perspective, is intended to prompt new ways of studying and promoting personal health literacy. It offers a focus on skills to help people move from an understanding of concepts and content to individual action and a focus on health within communities. Further quality school health education that emphasizes skills that teaches students how to learn about their health, how to use skills that have utility across various facets of life, and why these skills are important is foundational to health literacy [38]. Academic missions, structures, and systems need to align to support effective school health education versus as an add-on [39]. Health education is a distinct subject from physical education. Dual certification in both subjects requires sound preservice preparation in both disciplines. This needs to inform preservice programs in health education as well as state certification requirements [40]. Health education has also been identified by the US Department of Health and Human Services as a mechanism for building health literacy [21].

3.1 Takeaways: what is the significance for health educators? How do we continue to build our skills and improve our practice?

When health literacy skills are considered outcomes of the health education and school health programs, student health literate citizenry is advanced. Health literacy is supported by a skills-based health education approach. As health educators, we should be committed to this goal, student health literacy citizenry and our collective practice should reflect this commitment at the national, state, and community level.

4. Health education

In both school and community settings, health education, takes many different forms yet is built on similar principles and understanding. Educating for health means planning authentic learning experiences to support learners' and communities' development of the health skills essential for adopting and maintaining health-enhancing behaviors [23, 41, 42]. These planned efforts should be equitable and allow learners to a) adjust new learning and skills to their lived experiences without compromising healthy outcomes, b) acquire functional knowledge (essential health facts and concepts), and c) apply evidence-based and evidence-informed practices. Learners can learn and practice health skills to build the self-efficacy and agency necessary for maintaining a healthy life. Health education is also described as efforts to improve health literacy skills, health information and other health skills, and voluntary behaviors that promote health outcomes in individuals, groups, and communities [43]. One of the Core Beliefs of the American School Health Association is, "Core Belief 1:

Health and learning are directly linked and essential to the development of healthy, resilient citizens. Academic success is an excellent indicator of the overall well-being of youth and a primary predictor of adult health outcomes. This belief addresses the issue of disparities and the achievement gap and offers solutions." [44].

Schools, where children and youth learn, and grow are one of the best settings for health education. Frameworks like the WSCC model, the WHO HPS model, and United Nations Educational Scientific and Cultural Organization's (UNESCO) education for health and wellbeing approach demonstrate the importance of student-centered learning focused on well-being and dignity, engaging all stakeholders (learners, teachers, and administrators, parents, the community, etc.), and providing health education to promote student health, well-being and academic achievement [1, 10, 11] UNESCO's approach specifically focuses on the intersectionality of health, education, and gender equality. However, they all emphasize school health education as a fundamental part of a much broader school program that supports learners' health, well-being, and academic achievement.

In the US, the National Health Education Standards guide and drive comprehensive school health education throughout the nation [45, 46]. These standards assist schools and health educators with planning curriculums and lessons around functional knowledge to support acquisition of health skills. Building these health skills advances health literacy where students are more adept at accessing and navigating health information, supports, and services in ways that are health enhancing. Health education strives to create learning experiences that promotes individual, family and community health. This is the goal of health education or the end in mind when building curriculums and planning lessons. The eight standards which serve as a guide for health educators can be found in **Table 2**.

Health education in US schools, pre-kindergarten through 12th grade, and in community settings is taught across many health topics, and comprehensive and

National Health Education Standards	
What students will **KNOW an BE ABLE TO Do** following a health education lesson or unit.	
Planning with the END in MIND – Health Literacy	
Standard 1 - Know Functional Knowledge	Students will **comprehend concepts** related to health promotion and disease prevention to enhance health. (Functional Knowledge)
Standard 2 - Do Health Skill	Students will **analyze the influence** of family, peers, culture, media, technology, and other factors on health behaviors.
Standard 3 - Do Health Skill	Students will demonstrate the ability to **access valid information, products, and services** to enhance health.
Standard 4 - Do Health Skill	Students will demonstrate the ability to **use interpersonal communications skills** to enhance health and avoid or reduce health risks.
Standard 5 - Do Health Skill	Students will demonstrate the ability to **use decision-making skills** to enhance health.
Standard 6 - Do Health Skill	Students will demonstrate the ability to **use goal setting** to enhance health.
Standard 7 - Do Health Skill	Students will demonstrate the **ability to practice health-enhancing behaviors** to avoid or reduce health risks.
Standard 8 – Do Health Skill	Students will demonstrate the **ability to advocate for personal, family, and community health**.

Table 2.
National Health Education Standards.

US CDC's Healthy Schools Characteristics of an Effective Curriculum
1. Focuses on clear health goals and related behavioral outcomes.
2. Research-based and health behavior and learning theory-driven.
3. Addressed values, attitudes, and beliefs.
4. Addresses individuals and group norms that support health-enhancing behaviors.
5. Reinforces protective factors and increasing one's perception of personal risk and harmfulness linked with unhealthy practices and behaviors.
6. Addresses social pressures and influences.
7. Builds personal competence, social competence, and self-efficacy through development of health skills.
8. Provides functional knowledge that is basic, accurate, and directly contributes to health-promoting decisions and behaviors.
9. Uses strategies to personalize information, engage students and provide opportunities to practice health skills.
10. Provides age-appropriate and developmentally appropriate information, learning strategies, teaching methods, and materials.
11. Incorporates culturally inclusive learning strategies, teaching methods, and materials.
12. Provides adequate time for instruction and learning include time to practice.
13. Provides opportunities to reinforce skills and positive health behaviors
14. Provides opportunities to make positive connections with influential others.
15. Includes professional development to enhance teaching and learning.

Table 3.
The US CDC's healthy schools characteristics of an effective curriculum [46].

effective curriculums are encouraged. The US Healthy People Objectives, which guide efforts to improve health outcomes, include objectives for increasing health education courses for students in grades six through twelve and increasing health literacy among populations of all ages [47]. School leadership should view health education as a vital link between student health and academic success. The US CDC's characteristics of an effective curriculum (**Table 3**) and UNESCO's strategy on education for health and well- being further unpack vital components of health education programs [3, 46]. UNESCO developed an educational strategy to support health and well-being. "To achieve a vision where all learners can fulfill their potential, UNESCO will:

• Create and support school systems that promote physical and mental health

• Empower learners with good quality comprehensive sexuality education that includes HIV, life skills, family, and rights; and

• Nurture safe and inclusive learning environments that are free from all forms of violence, bullying, stigma, and discrimination."

Examples of UNESCO program elements including the importance of a) children and youth learning to building healthy, respectful and gender-equitable relationships, b) teacher training and development, c) gender equality and comprehensive sexual health education; d) the value of online learning; and e) inclusive education and safe inclusive learning environments.

4.1 Takeaways: what is the significance for health educators? How do we continue to build our skills and improve our practice?

Development of learners' functional knowledge and health skills, along with the characteristics of effective health education curriculums should guide our work as health educators. These characteristics enable conditions to drive implementation with an emphasis on skills infused with developmentally appropriate and scientifically accurate health content. We need to keep this in mind when developing, implementing, and evaluating health education lessons, unit, and programs.

5. Educating for health and health education pedagogy

Education for health empowers people and communities and occurs on a global level. A constructivist and social justice approach using the socio-ecological model as a lens is a foundational core for framing education for health [48–50]. Learners build and co-construct knowledge in a social setting through engaging learning activities. Social constructivism considers that learners obtain knowledge through socialization, however; various cultures would result in different learning and produce very different narratives. The socio-ecological model (SEM) posits that factors shape an individual's health status, related behaviors, and choices at the intrapersonal, interpersonal, organizational, community, and policy levels [50]. Health education practice is best when learning is dynamic and interactive. Students learn in groups or with a partner, share prior knowledge, curiosities, and assets, and knowledge. Health education practice has historically examined health equity issues through needs assessment and learning experiences that foster voluntary health-related behavioral and social change.

A culturally responsive teaching approach where students make meaningful connections between learning, their cultures, and life experiences, increases students' ownership of learning [51, 52]. Educators use cultural responsiveness to guide and elevate their practice and help students build their own person agency, so they have a more direct influence over health promoting actions. Understanding the identities and challenges students experience, and that cultivating learners' cultural assets improves learning because students feel seen and heard [52]. Too often the power in the educator-learner bond is with the educator, and the experience, knowledge, and ideas of the learner are assumed or disregarded.

Health education supports engaged citizenry, which takes many forms including individual and group actions aimed at addressing problems that are of public interest and concern. Health literate people are focused not only on improving and maintaining their own health but also on the health of others. What does this mean? Incorporating social justice into health education provides opportunities for higher-order critical thinking skills as well as engaging pedagogical practices. Addressing social determinants of health in education allows for inclusion of underlying social justice issues that influence health such as racism, xenophobia, sexism, heterosexism, transphobia, ableism, ageism, and income and wealth disparities [53]. The National Academies of Medicine's call to action stresses the upstream, systems-level changes that strengthen the integration of both health literacy and school health education to improve the health of future generations [54]. For example, using school level data to advocate for policies, programs, and practices to create equitable environments. We know that students identifying as Lesbian, Gay, Bisexual, Transgender, Queer or Questioning (LGBTQQ)

experience bullying more than their heterosexual identifying peers. Students may recommend the development or strengthening of Gay, Straight Alliances or other groups that support understanding and acceptance of all students [55].

Health educators must also be adept working with adult learners. This group wants to know the "why," behind learning about a particular issue or topic, are more self-directed than younger groups, and learning should involve them in the planning and be relevant to their lives [56]. Pedagogical approaches or health education planning should ensure learning goals are linked to learners needs and interests and incorporate the learners' life experience and knowledge into the learning environment.

5.1 Health education in schools

What should school health education look like? When should children first start developing health literacy skills? An ecological approach to health literacy acknowledges that the development of these skills is influenced by factors that interact and affect health behavior and ultimately health status. For example, parents and guardians initiate this learning through indirect (modeling, establishing value systems and standards) and direct learning (intentional conversations) during their time together. These individual and social environmental factors, which include social networks, organizations, communities, and populations, should be targets for interventions aimed at improving health status [50]. Schools are one of the primary places for the delivery of current, engaging, well-planned health education lessons and curricula. Developing health literacy skills through school-based efforts should commence during the pre-school years and continue until high school graduation [37, 57]. Hu et al. [58] found that health education, focusing on nutrition, for both kindergarten children and their parents, significantly improved healthy eating behaviors. This evidence supports the role school-based health education efforts can have on student learning. Healthy students will engage in learning better and learning about how to stay healthy keeps students healthy. As individuals become more adept with these health literacy skills, confidence in accessing and navigating literate environments will increase along with self-efficacy [59].

As stated in a previous section, effective planning for school health education begins with this end in mind: Health Literacy. This approach emphasizes that students should learn about and practice healthy behaviors while at school [34]. As active participants in learning, students build critical thinking, communication, problem-solving, and other skills that support health.

There are many learning strategies or activities to consider when planning health education. In the US elementary schools, classroom teachers may serve as the health educator. Some health topics are easily integrated into other subject areas such as English Language Arts, Math, and Science. In others, health education is a stand-alone content area. We would suggest that the approach is secondary to the intentionality of implementation of one approach or a combination of approaches. First and foremost, is to ask yourself, what is the purpose of the health education lesson? What learning outcomes do I want my learners to achieve by the end of the lesson, unit, or program? What health education standards or skills are my learners working toward achieving? Once these questions are answered, the health educator can then explore the various learning strategies. Health education professional preparation and ongoing professional development need to be based on a meaningful approach to skills-based health education [40].

When the selection of learning strategies is based on learner engagement centered on the emergence of agency that builds on lived experiences, there is room for building trust between the educator and students, critical thinking, and student and community voice. In practice, the health educator should purposefully intent for students, along with themselves, to grow during the learning process. Learning should be interactive where students learn in groups or with a partner, share prior knowledge, curiosities, and assets, and knowledge is perceived as dynamic and changes with our experiences [51, 60, 61]. We recommend the following when selecting learning strategies:

a. Be purposeful and intentional when selecting engaging learning strategies that allow for developing functional knowledge, and learning, practicing and mastering health literacy skills outlined in the national health education standards [62]. There are a multitude of strategies to select from that allow learners to accomplish learning outcomes. These strategies should address the cultural composition of the group, resonate with students of all sexual orientations and gender identities, bear in mind learners' literacy levels, and represent diverse groups. Participatory methods allow learners to observe, model, and practice health skills in authentic contexts. Student centered learning strategies put the student at the center of constructing their learning and the health educator facilitates from the outside. In small or large groups, students are actively participants in their learning. This could be through student choice projects, brainstorming (in-person or online), role plays, gallery walks, online or in-person discussion groups, games, or collaborative work, interviewing others, case studies, creating personal, family or community health plans, using social media to address a health issue, share family or cultural health stories through a media composition, research common solutions and create new way to solve a health problem, etc.

b. Plan for and present intention questions that require critical thinking. This allows learners to take charge of their learning, ask questions, and become problem solvers [60]. How do you know this, how would you think differently if you had another perspective, do you agree or disagree and why, does everyone act that way, why or why not, what questions would you ask if you could meet this person, is there a better solution to this problem? Giving learners opportunity to think about their thinking help construct new knowledge and skills.

c. Provide opportunity to determine students' prior knowledge or what the students know about a health topic, or what they want to learn. This helps pique and restore interest. What questions or hypotheses do students have about this topic?

d. Identify ways to personalize learning to maximize student engagement and ownership of learning [63]. Examples include support or scaffolding students based on learning competency through conferencing and small group work, self-paced assignments, and giving students choice in what they will learn and how they will learn. These efforts allow students to develop more agency during in-person and online learning. The educator meets them where they are, which helps maximize learning.

e. Allow students to express what they are experiencing when learning. What are they thinking, noticing, feeling?

f. Provide students with time to make sense of thoughts, revelations, or discoveries as they relate to their lives. How are they different because of what they have learned?

g. Make time to give feedback, which allows the health educator to address misunderstandings and improve practice while learning from the student.

h. Wierman [64] identified 5 brain-based learning strategies to boost learning, retention and focus including the creation of a safe and supportive learning environment, establishing turn and talk time to enable students to process information and skill development; incorporate visual elements that support topical areas, break learning into chinks and incorporate movement into lessons.

5.2 Takeaways: what is the significance for health educators? How do we continue to build our skills and improve our practice?

We need to remain learner centered in our planning and educating. Our practice should incorporate personalizing learning for our students as much as possible and acknowledge what our students brings to the learning relationship. When we can help our students build or construct their health knowledge and health literacy skills, they deliberately add new knowledge to their previous knowledge. This elevates them to a more powerful degree of knowing and doing. We need to design lessons and experiences that actively engage them as learners. As health educators, we should learn with our students, earn their trust as they share knowledge, ideas, aspirations, fears, and success.

6. The health education profession and ongoing professional development

The formation of a health educator's professional identity is not static and should evolve with continued efforts to grow and change as a learner, educator, and leader. In today's world, the health education landscape needs educators to create opportunities for learners to freely exchange ideas to share stories, discipline knowledge, and new learnings [40, 51] Health education across the globe centered on the emergence of learner agency that builds on lived experiences as mechanisms for improving health outcomes can transform learning by creating space for individual and community voice.

Developing functional knowledge needed for the profession and examining the complexities of health behavior and promoting health on an intrapersonal, interpersonal, institutional, and community level are fundamental concepts that health educators must employ. In the US, The National Commission for Health Education Credentialing (NCHEC) designated eight responsibilities for health educators and each responsibility has competencies and sub-competencies [65]. The eight areas are a) Area I: Assessment of Needs and Capacity, b) Area II: Planning, c) Area III: Implementation, d) Area IV: Evaluation and Research, e) Area V: Advocacy, f) Area VI: Communication, g) Area VII: Leadership and Management, and h) Area VIII: Ethics and Professionalism. Professionals responsible for implementing health education and health promotion should understand health literacy and its impact on health outcomes. Health literacy is embedded in several of the health education specialists' professional areas of responsibility. The health education and health promotion profession, in the US and globally, strive to provide an impetus for change to promote health-literate individuals and organizations [66].

What constitutes quality professional development? We in believe professional development that allows for a growth mindset approach, where professionals learn, apply skills, evaluate beliefs that hinder equitable learning, reflect, and improve competency. Safe learning formats should allow for health educators to explore personal perspectives and vulnerabilities. Professional development models where educators learn, analyze, dialog, assess competence with standards, and evaluate beliefs improve self-efficacy. Ollis [67] and Bogler [68] demonstrated that professional development had favorable results on teacher self-efficacy and that training increased perceived self-efficacy in pedagogical methods and subjects taught. Learning opportunities focused on capacity-building support educator self-efficacy.

Professional development can take the form of in-person learning, online learning, online communities, and access to online resources and tools. Addressing learner and professional teaching standards is critical for successful professional development. Resources and effective strategies for addressing barriers, including comfort with health education topics, personal perspectives, should also be covered. These efforts and support for self-reflection and growth will increase self-efficacy and educator agency. The following professional development recommendations can serve to build health educators' capacity and continue to improve practice [69].

1. Gauge health educators' professional development interests, needs, and ideas including formats for learning.

2. Select professional development formats to maximize engagement and buy-in, develop deep content knowledge, apply, and practice pedagogical skills, and include a variety of learning methodologies.

   a. Examples include independent self-study, video analysis, case study, professional learning communities (where we all contribute to learning while gaining knowledge and skills), observing a lesson, coaching, peer observation and feedback.

3. Create your professional development with clear outcomes that identify the expected results of professional learning.

4. Assess health educators' strengths, comfort and confidence with health topics, populations, and pedagogies, using a growth mindset approach. How can we reflect on how we view our own growth and failures as opportunities to learn and do better? What makes us uncomfortable with teaching health education? Why is it important to disclose what we know to each other?

5. Incorporate learning and using technology in health education. More research is being conducted to determine the values of how technology can support health education learning [70, 71].

6. Plan for and cultivate a professional development setting where health educators learn through sharing, talking, building, collaborating, practicing new skills, and leading.

7. Provide a forum where health educators' voices are heard.

8. Include learning and discussion on best practices and research backed health education and learning strategies for learning success.

    a. Include opportunities to continue master planning for authentic health education lessons based on standards and skills development that foster health literacy and well-being.

    b. Identify pedagogical skills and learning strategies that engage learners in higher-order thinking. Example include having educators participate in a variety of educational activities and report on what they learned and if participation raised any questions. Have them evaluate self-efficacy with implementing

    c. Pose the following questions: What does learning really look like? What does it mean for a student to meet the learning outcomes (objective)?

9. Plan for opportunity for health educators to personalize learning, practice new skills including reflective practice, and create a support plan.

10. Pose the following questions: How has your identity as a professional health educator evolved? What do you need to continue to cultivate your identity formation and reflective practitioner practice?

11. Create space where health educators critically think about and formulate ways to best acknowledge their learners. How can they continue to recognize the strengths and contributions their learners can make and not focus solely on deficits.

12. Conduct assessments of professional development to learn if outcomes were met, garner support for future opportunities and make changes based on feedback.

    a. Explore and identify contacts for support, ideas, and collaborations. These include colleagues, professional associations, non-profit, community and government organizations.

Provide opportunities to learn from and collaborate with international health educators and professionals. Some examples are provided in the **Table 4** below.

6.1 Takeaways: what is the significance for health educators? How do we continue to build our skills and improve our practice?

Professional development for health educators should focus on capacity building and not fixing deficits. Opportunities should build comfort, develop deep content knowledge, apply, and practice pedagogical skills and engage learners. We should expect and demand for opportunities to build the skills necessary for planning and implementing effective and engaging health education lessons or interventions. Identify your partners that can support your efforts. Health education professionals should consider joining professional associations to support your practice. This will connect you to like-minded professionals nationally and across the globe.

American School Health Association	International Union for Health Promotion and Education	Society for Public Health Education	Global Health Education
American Public Health Association (APA)	National Commission for Health Education Credentialing	Society of Health and Physical Educators	World Health Organization
AAHE	Society of State Leaders of Health and Physical Education	APA Public Health Education and Health Promotion	

Table 4.
US and international professional health education associations.

7. Conclusion: next steps and looking forward

How do we continue to inform key stakeholders and the larger community that health education creates opportunities for improved health and well-being? Healthier students learn better and poor health impacts educational attainment [72, 73]. We much continue to engage in this ongoing work to link the health and education sectors. We must create cohesion and alignment at the national, state, community, and school levels and use a more comprehensive model for health education. There are great benefits in using the WSCC and UNESCO model to continuously develop and refine coordinated school health efforts that support rigorous health and education outcomes for all youth. This can reverse the causality. As we move to create more health-literate societies in our countries and beyond, we must stay vigilant to the conditions of individuals and communities lives that impact both health and education. Health literacy is one of the social determinants of health. This work along with the implementation of skills-based health education can inform pedagogical practices that address the social determinants of health and create environments that support healthy literacy and healthy behaviors for all.

Now more than ever, there is a need for highly qualified health educators. Building confidence and competence in our health educators' practice improves health outcomes for all. We must invest in high quality preservice education and ongoing professional development to support the growth of all health educators. The WSCC model and the HPS model should be used to frame opportunities to consider health education and the bidirectional influences on each component of the model to reinforce and reimagine the connections between education and health. We anticipate that ongoing opportunities to connect health education and social justice will continue to evolve. We look forward to new learning that enables conversion of these relevant domains to improve delivery of health education. Continuing to create systems, policies and practices that put students and their health at the center of the educational system builds health literate individuals and thus, a health literate society.

Conflict of interest

The authors declare no conflict of interest.

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