



Published in final edited form as:

J Sch Health. 2021 October ; 91(10): 774–787. doi:10.1111/josh.13076.

The Health Education Teacher Instructional Competency Framework: A Conceptual Guide for Quality Instruction in School Health

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Abstract

BACKGROUND: Teacher instructional competency, the set of essential knowledge and skills needed to guide teaching practice, is critical to the successful implementation of school health education. The purpose of this paper is to introduce the Health Education Teacher Instructional Competency (HETIC) framework, a new conceptualization describing teacher characteristics, essential knowledge, and essential skills, which can influence instructional practice and improve student learning outcomes in health education.

METHODS: Data from 17 publicly available guidance documents, professional standards, published reports, and empirical studies relevant to the fields of public education, school health education, and sexual health education were abstracted and analyzed using qualitative thematic content analysis.

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Human Subjects Approval Statement

This paper involved no human subjects, and therefore, was exempt from examination by an Institutional Review Board.

Conflict of Interest

All authors of this article declare they have no conflicts of interest.

RESULTS: The framework describes 3 domains: personal characteristics, essential knowledge, and essential skills, which are believed to contribute to teachers' instructional competencies in delivering health education. The knowledge domain asserts 5 key categories, while the essential skills domain includes 3 categories (learning environments, content and delivery, and collaboration and learning) and contains 11 unique skills. Collectively, these domains are influenced by the learner, school/community, and policy-level factors that shape health education curriculum and instruction.

CONCLUSIONS: The HETIC framework presents a conceptual roadmap to guide quality health education preparation, job-embedded training, and delivery. Improving teachers' instructional competencies strengthens learning and prosocial environments that are inclusive, responsive, and affirming of students' health and learning needs. Teacher who demonstrate instructional competency can help students to achieve desired education and health outcomes, specifically acquiring the knowledge and skills needed to adapt, practice, and maintain healthy behaviors throughout their lifetime.

Keywords

school health; health education; sexual health education; instructional competency; professional teaching standards; teaching practice

Research suggests that teachers are one of the most important factors in facilitating students' success in the classroom.¹⁻³ Across the field of education, robust evidence describes the effects of teachers' instructional practices on student learning and academic achievement in English, math, and science education.^{4,5} Higher student achievement is associated with teachers who use a variety of teaching methods; demonstrate organization in delivery; establish clear learning and behavioral expectations; show enthusiasm for content; build positive teacher-student relationships; and treat students with care, fairness, and respect.^{1,6-11} Considering the role teachers' play in student learning and achievement, it is critical to understand personal characteristics, knowledge, and skills that support their instructional behaviors, and in particular, those teaching practices that positively influence student outcomes.

Definitions of teacher competency vary greatly across academic disciplines and include several related, yet distinct constructs and domains. Competencies generally comprise a set of knowledge, attitudes, skills, and abilities needed to adequately perform a given role.¹² Jones et al describe competency as a combination of attributes enabling an individual to perform a set of tasks to an appropriate standard.¹³ In teaching, evidence suggests factors contributing to competency, as defined by qualifications measured on licensure and credentialing, include: professional preparation, subject matter knowledge, and pre-service and in-service teaching experience.^{8,14,15} Furthermore, a teacher's demonstration of instructional differentiation, ability to clarify complex concepts, set clear learning expectations, and integrate technology are competency domains for stimulating student learning and achievement.¹⁶

Despite evidence describing what constitutes competent instructional practice in education broadly,^{2,16,17} there remains no unanimous consensus on the core set of teacher

competencies needed to support instruction in school health education. Over the past decade, several organizations, including American Association for Health Education, and The Society for Public Health Education have contributed frameworks organizing health education teacher knowledge and skills,^{18–20} while other standards and best practice recommendations asserting competencies continue to emerge.^{21,22} Moreover, in the context of sexual health education—a core component of health education—several organizations have championed separate, stand-alone teacher competency standards to guide instruction.^{23,24} A unified competency-based framework, inclusive of multiple standards and recommendations, is lacking from the school health education literature. Such a framework would provide conceptual clarity and operationalization through research and practice-informed synthesis to address current gaps in the field.

Thus, the aim of this study is to introduce a conceptual framework for understanding instructional competencies among health education teachers. The framework, titled Health Education Teacher Instructional Competency (HETIC), defines instructional competency as the combination of personal characteristics and professional knowledge and skills that through practical application contributes to quality instruction that influences student academic and health behavior outcomes. The HETIC framework describes essential knowledge and skill domains, including descriptions and sample performance indicators, to illustrate specific content and skills needed by those delivering health education. This paper describes the HETIC framework’s iterative development, situates findings among other competency-based frameworks in education, and highlights implications for using the framework to support health education research and practice.

METHODS

This qualitative study used thematic cross-case analysis across a 4-phased developmental approach,²⁵ including: (I) environmental scan of existing education and school health competency standards, guidance, and recommendations; (II) inductive thematic content-coding and cross-case analysis; (III) expert consultation; and (IV) final framework development.

Phase I: Environmental Scan

A systematic, environmental scan²⁶ of existing education and school health competency frameworks, skill-related standards, and guidance was conducted use keyword searches (ie, *competency, instructional/teaching skills, professional standards, instructional practice, health education, and sexual health education*) of both peer-reviewed and gray literature via the following databases and search engines: CINAHL, ERIC, Google Scholar, and Google.²⁷ For study inclusion, case documents must have: (1) described professional competency, skill-related standards, and guidance for teachers or facilitators from the fields of general education (eg, English/language arts, mathematics, science, and social studies), school health education, or sexual health education; and (2) been available via online search or accessible with permission from author organization(s). We also consulted experts in the fields of school and public health to identify relevant case documents not captured through database searching.

Phase II: Inductive Coding and Cross-Case Analysis

A data matrix was created to abstract and analyze data from case documents. Coding and analysis were multistage and iterative, allowing for saturation of codes and categories represented in the data while exposing emergent patterns.²⁸ In this phase, two coders used an exploratory, inductive coding approach to explore patterns and develop insights across documents. Each coder reviewed case documents and recorded initial, open codes. Next, coders colligated axial codes into categories based on similarities and differences and did a cross-case analysis using a variable-oriented approach.^{25,28,29} Codes and categories were collapsed when possible, and coders discussed concordance and discrepancies, making changes to reach 100% agreement.²⁵

Throughout phase II, themes beyond individual characteristics, knowledge, and skills (eg, learner, school, or policy-related factors) emerged and were captured by coders. Health education instruction is largely shaped by teachers' instructional knowledge, skills, and behaviors, but also nested within interpersonal, organizational, and policy-level factors that influence instruction. Capturing open codes across the socio-ecological framework helped support further development through phases III and IV of the study.³⁰

Phase III: Expert Consultation

To address the content validity of the framework,³¹ authors presented a preliminary framework draft at academic conferences to school and public health experts. In each presentation, authors sought critical feedback on the proposed framework, capturing expert responses verbatim, and analyzing and integrating recommendations into final framework development. The final framework development (Phase IV) is presented as findings below.

RESULTS

The HETIC framework summarizes 17 case documents representing diverse evidence (ie, peer-reviewed studies, gray literature, and practice-based guidance) across general education (n = 5) and school health education (n = 12) (see Table 1). Tables 2 and 3 illustrate the essential knowledge and skill domains, including categorical descriptions and sample performance indicators to help define scope. The performance indicators were created from data in eligible case documents and expert consultation.

Figure 1 graphically displays the framework, placing instructional competency at the core of 3 overlapping domains needed by those who deliver health education. The content within each domain describes unique personal characteristics; essential knowledge (n = 5), and essential skills (n = 11) needed by teachers to strengthen competent practice. Not mutually exclusive, the circular arrows suggest all domains influence one another simultaneously, contributing to instructional competency that is fostered by practical application and experiential learning between teachers, their students, and the environment. The figure also suggests instructional competency is bounded by policy, school/community, and learner factors influencing delivery.

Ring of Influence

Although the framework calls out intrapersonal characteristics, knowledge, and skills influencing health education instruction, it is important to consider how other factors influence teaching practices.³⁰ Surrounding the instructional competency core, a ring of influence includes factors from policy, school/community, and learners shaping instruction. For example, a *policy factor* such as state-specific credentialing and certification processes may require teacher candidates to demonstrate knowledge or skill proficiency to ascertain licensure.^{19,32} *School/community factors*, including the physical (eg, classroom or school building) and psychosocial environment, shape teaching practices across general education, and health education.³³ Community priorities can also impact instructional practices in the classroom. For example, parental support for sexual health education³⁴ can influence district curriculum review and adoption. Most directly, *learners* influence instruction. Factors such as individualized learning preferences, academic history, and behavioral characteristics including responsiveness to classroom management techniques influence delivery.³⁵ Moreover, rapport among student members of the classroom, and dynamics of the teacher-student relationship, influence instruction.^{11,33}

Personal Characteristics Domain

The personal characteristics domain describes traits, attributes, and experiences contributing to instruction in health. While not the primary focus of the framework, a few characteristics emerged continuously. For example, academic preparation and licensure in health education can help to ensure comfort with health-related topics and skills and confidence in facilitating student performance.^{24,36,37} Research by Murray et al corroborates this characteristic by documenting empirical relationships between teacher certification and improvements in student health-related knowledge gains,^{38,39} underscoring the importance of formal preparation in health education. A health education teacher's understanding or belief that health and learning are connected is also crucial to their developing competency.⁴⁰ To optimize inclusive practices, incorporating diverse perspectives and ideas and using culturally responsive teaching practices can help teachers adapt to learner, school, and community needs.^{21,22,24,37,40} Research also indicates teachers' positive, caring attitudes;^{41,42} fairness, and respect toward students, and enthusiasm for content⁴³ are linked to improvements in student performance; all characteristics emergent in the HETIC framework. Importantly, the framework assumes these personal characteristics are dynamic and evolve throughout a teachers' tenure, simultaneously (and independently) to varying degrees based on experience.

Essential Knowledge Domain

Case documents suggest 5 knowledge categories for which teachers should demonstrate mastery, including: child/adolescent development,^{19,22,24,36,40,44} learning/community characteristics,^{21,24,36,37,40,44–46} subject content knowledge (SCK),^{18,19,21,24,36,37,40,44–50} pedagogical content knowledge (PCK),^{22,36,40,45–47} and professional standards and policies.^{18,19,24,36,37,40,45,46} Collectively, this domain represents the breadth and depth of health content and pedagogy-related information teachers must understand, apply, and evaluate to support instruction. Health education teachers should demonstrate knowledge

of cognitive, affective, and physical developmental progressions across childhood and adolescence. Moreover, teachers must explain how learning occurs and the related implications on academic and health outcomes.^{22,24,40,44} Integrating diverse learner characteristics (eg, abilities and motivations) and community contexts (eg, behavioral norms and values) in which students live, work, and play^{21,24,36,37,40,44–46} can help teachers create and adapt learning experiences that reflect intentionality and inclusion.

A mastery of SCK—facts, concepts, theories, and principles taught and learned through a course of study—ensures teachers can identify content and processes of inquiry essential to health education.^{18,19,21,24,36,37,40,44–50} For example, within sexual health education, teachers should be able to describe a range of prevention methods to address STIs, including HIV, and unintended pregnancy.^{24,36} The importance of SCK is well documented in the teacher education literature;^{1,3,6,16} yet given the interconnectedness of health and learning^{51,52} teachers must identify relevant health content and contextualize such information using teaching methods that address not only cognitive learning objectives but also support skills for maintaining or changing behavioral health outcomes.

The fourth knowledge category, PCK, recognizes the intersection of subject matter and strategies for teaching (eg, applying learning theory, curriculum development, and instructional modification and adaptation).^{22,36,40,45–47} Meta-analytic evidence suggests teachers' use of PCK to teach subject matter in math and English is associated with improvements in student achievement.⁵ Developing PCK allows teachers to connect health-related concepts and skills to previous learning,^{22,44} select appropriate instructional strategies to motivate and engage students,⁴⁷ and evaluate performance using diversified assessment techniques.⁴⁰

Lastly, teachers should demonstrate knowledge about public education (ie, philosophical and historical foundations), relevant federal/state/local laws and policies governing instruction, and profession-wide standards and ethical considerations.^{18,19,24,36,37,40,45,46} For example, knowledge of health education professional codes of ethics,⁵³ common implementation frameworks such as the Whole School, Whole Community, Whole Child model,⁵⁴ and policies mandating child abuse reporting⁵⁵ shape instruction. Table 2 describes the essential knowledge domain, including definitions and sample performance indicators for each category.

Essential Skills Domain

Eleven essential skills are identified as necessary to support quality instruction in health education. The HETIC framework defines skills as a set of teaching acts or behaviors intended to directly or indirectly facilitate learning. Skills in this domain are sub-divided into learning environments (n = 2); content and delivery (n = 5); and collaboration and learning (n = 4). The first sub-domain, learning environments, asserts teachers must create and maintain safe and supportive spaces for all students,^{18–20,22,24,36,37,40,44–46,50} and manage behaviors effectively.^{18,24,40,46,47,49} Evidence suggests the physical and psychosocial learning environment is a key predictor in a student's ability to learn and feel comfortable in class,^{56–58} highlighting teacher inclusivity and management-related skills as essential. Although no single factor defines a classroom climate, safe and supportive

spaces typically include elements, such as facilitating a sense of belonging, cooperation and mutual respect among students, and positive teacher-student relationships.^{11,33} Teachers can engage students by co-creating classroom rules and norms, modeling inclusive and affirming language and behavior,^{36,40,46} and building individual and group-based rapport.^{20,36} Moreover, using students' chosen name(s) and pronoun(s), reinforcing expectations and applying consequences, remediating stigmatizing language and actions, and using joint decision-making models are practices to improve inclusivity.^{19,24,36}

Teachers manage student behaviors using effective techniques^{19,40,46} and appropriately responding to both engaged and non-engaged students, re-directing off-task behaviors and leveraging the physical space to support instruction.^{46,50} Beyond remediation of undesirable behaviors, teachers must also be skilled at using positive reinforcement to sustain desired student behavior during health education.^{36,50} Review of the literature suggests that effective classroom management is *preventive* rather than *reactive*, and teachers successful in creating well-managed classrooms facilitate higher student achievement.^{5,59,60}

Content and delivery, the second essentials skills sub-domain, includes 5 pedagogy practices. In accordance with the majority of study case documents, teachers must demonstrate mastery in a set of *core instructional functions* (ie describe the primary roles and responsibilities of teachers in facilitating student learning and performance) for teaching health education, including: (1) assessing student need,^{18,19,61} (2) planning instruction,^{18,19,21,22,24,36,40,44–48,61} (3) implementing instruction,^{18–22,24,36,37,40,44,46,48–50,61} (4) evaluating student performance,^{18–22,24,40,44,46–48,50} and (5) reflecting on teaching practices.^{18,19,21,22,40,44,46} These functions (1-5) were cited most often across the 17 case documents used in our study, suggesting their importance for instruction in health education.

Teachers must assess academic and health-related needs to create, select, or adapt content and instructional strategies to meet the learning and behavioral outcomes. First, teachers must use appropriate data to determine learning and health priorities,^{18,19,61} aligning appropriate learning objectives, content, and assessment to meet outcomes. Teachers should ensure congruence of health information and skill progression with relevant national/state/local frameworks and benchmarks (eg, National Health Education Standards) to increase the likelihood students will adopt health-promoting behaviors.^{18,62} In planning and implementing health education, teachers should be guided by, and focused on, desired learning and behavioral outcomes,^{18,19,21,22,24,36,40,44–48,61} and provide adequate time for students to practice and reflect on skill development. Connecting learning from previous lessons can improve students' knowledge and behavioral transfer,⁴⁴ aid teachers in promoting critical-thinking and problem-solving skills,^{22,40,50} and accommodate diverse learning preferences.^{19,20,40,44} Moreover, teachers must be adept at creating developmentally and culturally responsive assessment strategies to evaluate student performance.^{18–22,24,40,44,46–48,50} For example, formative assessment measuring student knowledge about STIs and pregnancy risk can be used to plan and select teaching materials; whereas, summative evaluation can be used to capture cognitive and behavioral performance at the conclusion of instruction. Case documents also suggest teachers must reflect on teaching practices to strengthen their instruction. Use of self-assessment rubrics, formal and

informal observation, and peer-to-peer feedback techniques^{18,22,40,44,46} can help to identify strengths and weaknesses in delivery and refine teaching strategies.

The last sub-domain, collaboration, and learning, asserts 4 skills to equip teachers as active collaborators and participants in their own learning. A teacher's ability to communicate effectively and efficiently underlies all skills within this sub-domain, and arguably the entire HETIC framework.^{18,19,40,45–49,61} Teachers should be skilled in engaging youth as well as school and community stakeholders, such as parents, other educators, administrators to support instruction.^{18–21,40,48,61} To facilitate collaboration with stakeholders, teachers can give and receive feedback related to their SCK, PCK, and core instructional functions.^{40,46}

Furthermore, teachers should engage in on-going professional learning, aligned to core instructional functions, as a mechanism to enhance knowledge and skills.^{19,20,22,24,40,46,50} Professional development (PD) positions teachers to acquire, generate, and use knowledge and skills to improve comfort and self-efficacy in the classroom. Evidence suggests participating in PD improves teachers' knowledge and skills in general education, health education, and sexual health education.^{2,39,63,64} For example, a study by Levenson-Gingiss and Hamilton (1989) testing effects of PD reported improvements in knowledge, perceptions of the importance of teaching curriculum, intent to teach the curriculum, and comfort level with sexuality education courses.⁶⁵ Teachers must view themselves also as learners, seeking innovative professional learning that expands their instructional skillset throughout their teaching tenure.^{24,46,64} Table 3 describes the essential skill domain, including definitions and sample performance indicators for each sub-domain.

DISCUSSION

The field of school health education is at a critical juncture; growing interest in implementation science⁶⁶ suggests factors in the delivery environment, such as intervention facilitators and teachers, have a large and measurable impact on changing individual knowledge, skill, and health behaviors. The HETIC framework centers the teacher amidst overlapping domains needed to support quality instruction in health education: personal characteristics, essential knowledge, and essential skills. A key feature of the framework also acknowledges the intersection of learner, school/community, and policy influences on instruction.

The framework contributes to the standards and competency-based literature on teacher practices,^{46,67} while uniquely asserting discipline-specific health information and skills. To our knowledge, this study is the first to synthesize and introduce unified competencies for those delivering health education in schools, contributing the first step toward better understanding elements of instructional delivery. Beyond operationalizing the domains of teacher instructional competency, the framework surfaces gaps in current standards and evidence used by the profession and establishes opportunities for research and practice to strengthen delivery.

Gaps and Opportunities

Culturally responsive health education.—The first gap identified was an overemphasis on content knowledge without appropriate focus on learner/community characteristics and pedagogy. Approximately 80% of the case documents (n = 14) included SCK as essential to teacher instructional practice. This is not surprising given the evidence from various academic disciplines^{1,6,16,32} and guidance from teacher education credentialing bodies stating discipline-specific information is needed to advance student performance³² and impact health.⁴⁸ In contrast, information related to learner/community characteristics and PCK was less represented across documents in our study (47%, n = 8 and 35%, n = 6, respectively). Such differences between SCK and other essential knowledge categories suggest teachers may lack developmental and contextual knowledge about their students and be unprepared to use relevant strategies to meet learning needs.

To address this deficit, future frameworks should incorporate cultural responsiveness information and strategies for teachers. Culturally responsive pedagogy serves to increase awareness and sensitivity teachers need to facilitate learning^{68–70} and ensures health-related information is contextually relevant and reflects learner, family, and community experiences. While infusing learner/community characteristics with SCK and PCK is believed to improve student academic outcomes,⁵¹ additional evidence is needed to document health education teacher's knowledge and use of culturally responsive health education to enhance instruction and improve student outcomes.

Inclusive and affirming health education.—Insufficient coverage of inclusivity-related knowledge and skills was another gap identified across case documents. Notable, however, was the explicit presence of inclusivity-related content within the sexual health professional teacher frameworks. For example, the Professional Learning Standards for Sexuality Education³⁶ state teachers must be able to: “demonstrate techniques to create an inclusive and affirming learning environment.” Likewise, the National Teacher Preparation Standards for Sexuality Education²⁴ state teachers must be able to “select or adapt sexuality education materials that both reflect the range of characteristics of the students and community and respect the visible and invisible diversities that exist in every classroom.”

The use of inclusive instructional practices that affirm and support all students, regardless of race, ethnic origin, biological sex, gender identity, gender expression, sexual orientation, religion, or cognitive or physical ability, is the expected minimum in health education delivery. Other leading frameworks should consider where inclusivity-related knowledge and skills can be added or revised. Evidence suggests teachers have unmet learning needs in applying inclusive knowledge and skills, establishing safe and supportive spaces, and providing systems of support to explicitly address health and educational disparities, particularly among sexual and gender minority youth.^{71–73} Future framework development should include inclusivity-related content to guide health education teachers preparation and training.

Usefulness in School Health Research

The HETIC framework informs health education research in several ways. First, most domain categories and performance indicators complement required skillsets of general education teachers⁴⁶ as noted above, yet competency in health-specific knowledge and skills is required to improve health outcomes. Although a systematic synthesis of the literature examining effects of health education teachers' instructional competencies on student health outcomes has not been completed, such investigation would be a critical next step to better understand how unique or collective competencies influence outcomes.

Second, building from this conceptual framework, it is important to develop instruments and test relevant domains and performance indicators.⁷⁴ Developing valid and reliable measures with adequate psychometric support to assess teachers' essential knowledge and skills would contribute significantly to the evidence base.⁷⁵ Further analyses might examine relationships between specific, additive, or cumulative effects of teachers' characteristics, knowledge and skills on instructional behaviors and student outcomes through rigorous evaluation. The HETIC framework can contribute to longitudinal assessment of teacher competency development over the career tenure, and be used to evaluate teacher mastery of core instructional functions following professional development (PD). However promising, current evidence describing effects of PD on teacher attitude, motivations, and intentions to implement essential knowledge and skills in the classroom^{2,39,63-65} may not address the relative effectiveness of actual teacher behavior on improving student outcomes.

Limitations

This study is not without limitations. Data were analyzed from case documents that met study inclusion criteria, yet additional documents may exist that were not captured. The study's qualitative methods aimed to identify emergent themes specific to instructional competency in health education, making no generalizations to other academic disciplines. Noteworthy, only one empirical study⁴⁵ was included to inform the HETIC framework development. As most case documents were conceptual frameworks or practice-informed guidance, lacking empirical testing, or evidence of effectiveness, caution in interpreting findings is suggested. Despite practical implications, the HETIC framework remains untested to determine reliability and validity of domains and structure.

Conclusion

The HETIC framework provides a roadmap of competent instructional practice for those delivering health education in schools. It underscores the importance of teachers as fundamental elements in creating environments, through their pedagogy, that connect students to learning and improve health and academics. By presenting a clear, unified definition of teacher instructional competency, school health professionals can maximize preparation, and training of effective instructional leaders in the classrooms to increase students' practice of healthy behaviors.

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IMPLICATIONS FOR SCHOOL HEALTH AND EQUITY

In this section, the authors highlight 3 ways in which the HETIC framework can be applied to current health education practice to strengthen quality instruction: (1) aligning instructional competencies in pre-service teacher preparation programs, (2) targeting instructional competencies within professional learning for teachers and (3) integrating instructional competencies into teacher hiring and evaluation systems.

1. *Aligning instructional competency in pre-service teacher preparation.* The HETIC framework can be applied to health education teacher preparation program design, curricula, and accreditation requirements. The Council for the Accreditation of Educator Preparation, in concert with the Specialized Professional Organization, could use the HETIC framework to set standards by which professional practice in health education preparation is evaluated.³² Moreover, the domain-specific performance indicators can be used to train and assess methods coursework and field-based experiences, allowing pre-service teacher candidates to refine their instructional skills before entering the workforce.⁷⁶
2. *Tailoring in-service professional learning to instructional competencies.* The framework can be used as a guidepost for planning, implementing, and evaluating professional learning for those currently working in schools. Specifically, job-embedded PD may target one or more essential skill(s) (ie, evaluating student performance and giving and receiving feedback), and provide modeling and feedback from trained facilitators to help in-service teachers practice and self-assess skills.⁶⁴ The framework can also be used to foreshadow potential collaborative efforts needed to strengthen health education delivery and training between school, university, and community partners.
3. *Integrating instructional competencies into hiring and evaluation systems.* Beyond implications for teacher preparation and training across the career pipeline, the HETIC framework can also inform systems of teacher recruitment, hiring, compensation, and performance evaluation.^{16,77} Schools may use hiring practices that integrate specific essential knowledge and skills (eg, require skill-specific presentations by job candidates) to ensure applicants have the necessary skills and content knowledge to be effective. Moreover, using specific performance indicators from the essential skills sub-domains as measures for observation and evaluation could improve the use of evidence-informed practices in the classroom.

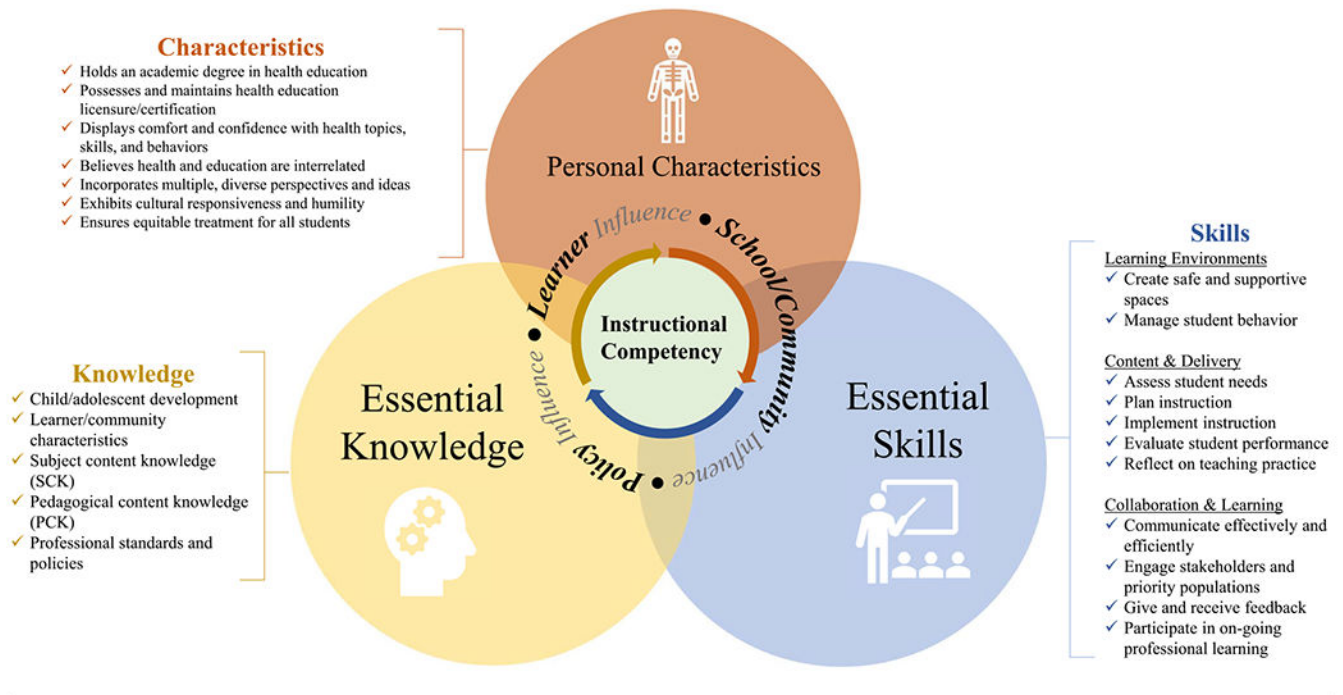


Figure 1.
Health Education Teacher Instructional Competency (HETIC) Framework

Case documents referencing teacher competency guidance, professional learning standards, and empirical evidence by content area

Table 1.

General Education	School Health Education	
<p>Lakehead University Faculty of Education, Canada (2018). "Essential Skills for Preservice Course Work and Placement." [Guidance document]</p> <p>Charlotte Danielson (2013). "The Framework for Teaching: Evaluation Instrument." [Guidance document]</p> <p>Council of Chief State School Officers (CCSSO) (2011). "The InTASC Model Core Teaching Standards: At a Glance." [Guidance document]</p> <p>American Association of Colleges of Teacher Education (AACTE) (2010). "21st Century Knowledge and Skills in Education Preparation." [Guidance document]</p> <p>American Association of Colleges of Teacher Education (AACTE) (2010). "21st Century Knowledge and Skills in Education Preparation." [Guidance document]</p> <p>Council of Chief State School Officers (CCSSO) (n.d.). "Interslate New Teacher Assessment and Support Consortium (INTASC) Core Standards." [Guidance document]</p>	<p>Society for Public Health Education (SOPHE) (2020). "2019 Health Education Teacher Preparation Standards: Guidelines for Initial Licensure Programs." [Guidance document]</p> <p>Sex Education Collaborative (SEC) (2019). "The Professional Learning Standards for Sex Education (PLSSE)." [Guidance document]</p> <p>Society for Health and Physical Educators (SHAPE) America (2018). "National Standards for Initial Health Education Teacher Education." [Guidance document]</p> <p>Society for Health and Physical Educators (SHAPE) America (2015). "Appropriate Practices in School-based Health Education." [Guidance document]."</p> <p>Moyinhan, S., Paakkari, L., Välimaa, R., Jourdan, D., & Mannix-McNamara, P. (2015). Teacher competencies in health education: Results of a delphi study. <i>PLoS One</i>, 10(12), e0143703.</p> <p>Healthy Teen Network (HTN) (2014). "Instructor Competency Assessment Tool for Sexual Health." [Guidance document]</p> <p>World Health Organization (2012). "Health Education: Theoretical Concepts, Effective Strategies, and Core Competencies." [Guidance document]</p>	<p>National Commission for Health Education Credentialing, Inc. (NCHEC) (2010). "Areas of Responsibilities, Competencies, and Sub-competencies for the Health Education Specialists 2010." [Guidance document]</p> <p>American Association for Health Education (AAHE)/The National Council for Accreditation of Teacher Education (NCATE) (2008). "2008 NCATE Health Education Teacher Preparation Standards." [Guidance document]</p> <p>Public Health Agency of Canada (2008). "Canadian Guidelines for Sexual Health Education." [Guidance document]</p> <p>National Board for Professional Teaching Standards (NBPTS) (2002). "Health Education Standards Statements, 1st Edition for Teachers of Students ages 11-18+." [Guidance document]</p>

Table 2.

Health education teacher essential knowledge domain

Knowledge Categories	Description	Performance Indicator(s)
K.1 Child/adolescent development ^{19,22,24,36,40,44}	Teacher understands the developmental progression and range of individual variation within each domain of learning; and how those domains affect health knowledge, skills, and behaviors.	<ul style="list-style-type: none"> • K.1.a: Explains the stages of cognitive, physical, and social development from childhood through adolescence. • K.1.b: Describes how learning occurs (eg how individuals construct knowledge, acquire skills, and develop habits of mind). • K.1.c: Describes how brain development affects child/adolescent cognitive and behavioral health-related decision making.
K.2 Learner/community characteristics ^{21,24,36,37,40,44-46}	Teacher understands that student experiences, talents, prior learning, as well as language, culture/heritage, and family and community values influence the learning.	<ul style="list-style-type: none"> • K.2.a: Fosters a sense of classroom community and climate by acknowledging each students' unique skills and talents. • K.2.b: Respects student's family structure, background, and culture. • K.2.c: Understands how factors outside of school may influence learning. • K.2.d: Understands systems of power, privilege, and bias and how those may disproportionality impact health. • K.2.e: Describes importance of culturally responsiveness information and skills to support student learning and health.
K.3 Subject content knowledge (SCK) ^{18,19,21,24,36,37,40,44-46,50}	Teacher understands key concepts/topics, assumptions, debates, and processes of inquiry within health education.	<ul style="list-style-type: none"> • K.3.a: Describes the multidimensional nature of health, including topics within mental, emotional, social, physical, environmental, and spiritual domains. • K.3.b: Describes disease etiology and prevention practices. • K.3.c: Describes factors that promote or inhibit health, including social determinants. • K.3.d: Explains theories relevant to human behavior change. • K.3.e: Describes characteristics of effective health education curricula. • K.3.f: Explains the importance of The Whole School, Whole Community, Whole Child Model.
K.4 Pedagogical content knowledge (PCK) ^{22,36,40,45-47}	Teacher understands how to select and apply instructional strategies to organize, represent, and adapt health concepts/topics and skills.	<ul style="list-style-type: none"> • K.4.a: Explains intersection between learning theory, subject matter, and curriculum development needed for planning and executing instruction. • K.4.b: Explains instructional principles and techniques, along with advantages and limitations for specific health-related content. • K.4.c: Understands how to connect health concepts, using diverse instructional strategies, to help students gain functional knowledge master skills. • K.4.d: Understands the six-step development process for teaching health-related skills (eg goal setting).
K.5 Professional standards & policies ^{18,19,24,36,37,40,44-46}	Teacher understands educational standards and frameworks and is aware of and committed to following federal/state/local laws and policies and a professional code of ethics.	<ul style="list-style-type: none"> • K.5.a: Understands historical and philosophical foundations of public education. • K.5.b: Understands the importance of health and educational standards frameworks (eg National Health Education Standards, National Sex Education Standards). • K.5.c: Describes federal/state/local laws and policies influencing health education. • K.5.d: Understands, and abides by, legal, ethical, and professional responsibilities and decision making outlined in a professional code of ethics (eg Health Education Code of Ethics)

Abbreviation: K = knowledge.

Table 3.

Health education teacher essential skills domain

Skill Categories	Description	Performance Indicator(s)
Learning Environments		
SLE.1 Creating safe and supportive spaces ^{18-22,24,36,37,40,44-46,50}	Teacher creates a learning space that is supportive and inclusive for all students, regardless of race, ethnic origin, gender identity, sexual orientation, religion, or cognitive and physical ability, to promote safety and learning.	<ul style="list-style-type: none"> • SLE.1a: Uses respectful and affirming tone throughout the lesson. • SLE.1b: Maintains professional demeanor throughout the lesson. • SLE.1c: Does not make discriminatory comments at the expense of others. • SLE.1d: Does not disclose inappropriate information about self, students, peers, friends, or families. • SLE.1e: Does not reinforce stereotypes. • SLE.1f: Models openness and respect for students, peers, colleagues, and parents/caregivers and families. • SLE.1g: Builds appropriate rapport with students and others in school. • SLE.1h: Demonstrates sensitivity toward racial/ethnic, cultural, gender, sex, and ability differences of students, peers, colleagues, and parents/caregivers and families. • SLE.1i: Uses students' chosen name(s) and pronoun(s) during all interactions. • SLE.1j: Allow students to co-create learning and behavioral expectations or norms. • SLE.1k: Displays student learning objectives/outcomes (SLO) in clear sight for all students. • SLE.1l: Uses a variety of techniques to review relevant health-related terms and vocabulary throughout lesson. • SLE.1m: Checks for understanding throughout the lesson.
SLE.2 Managing student behavior ^{18,24,40,46,47,49}	Teacher organizes and manages space, time, activities, and student behavior to enhance learning.	<ul style="list-style-type: none"> • SLE.2a: Facilitates learning activities that decrease or eliminate non-instructional time. • SLE.2b: Provides appropriate praise and positive reinforcement when students behave according to expectations. • SLE.2c: Encourages students to participate in individual and joint decision-making. • SLE.2d: Addresses inappropriate student comments or behaviors immediately. • SLE.2e: Responds appropriately to unengaged or off-task students. • SLE.2f: Uses physical environment to circulate and monitor behaviors. • SLE.2g: Establishes seating arrangement to facilitate instructional goals. • SLE.2h: Establishes student-led daily routines and tasks. • SLE.2i: Establishes clear and consistent expectations for transitions, both within and between instructional activities. • SLE.2j: Uses signals or verbal cues to immediately quiet students and gain full attention.
Content and Delivery		
SCD.1 Assessing student needs ^{18-20,40,44,45,48,61}	Teacher develops, selects, and uses valid and reliable data sources to determine student academic and health-related priorities.	<ul style="list-style-type: none"> • SCD.1a: Describes how to access national/state/local student health and academic data. • SCD.1b: Accesses data relevant for building student knowledge and skills necessary for behavior change • SCD.1c: Selects valid sources of information about health needs. • SCD.1d: Infers health needs based on student data and performance. • SCD.1e: Develops appropriate data-gathering instruments. • SCD.1f: Collects data to determine gaps in students' health knowledge and skills. • SCD.1g: Applies student health and academic data to planning health education content and instruction. • SCD.1h: Consistently reviews data to make necessary pedagogical modifications and adaptations to meet the needs of all students. • SCD.1i: Analyzes relationships between environment factors and individual and community health behaviors. • SCD.1j: Synthesizes student, school, and community-level data to support health education programs and practices.
SCD.2 Planning instruction ^{18,19,21,22,24,36,40,44-47,61}	Teacher plans instruction that supports every student in meeting learning goals, integrating learner/community characteristics, subject content knowledge, and pedagogical content and skills.	<ul style="list-style-type: none"> • SCD.2a: Applies national/state/local laws, policies, and standards to evaluate curriculum and teaching materials for their comprehensiveness, accuracy, and usefulness for representing ideas and concepts. • SCD.2b: Incorporates national/state/local education and health standards to guide instruction. • SCD.2c: Aligns instruction to scope and sequence to reinforce sequential, progression of learning across curriculum. • SCD.2d: Identifies measurable student learning objectives/outcomes (SLO). • SCD.2e: Identifies measurable healthy behavior outcomes (HBO). • SCD.2f: Creates developmentally and culturally responsive teaching materials used for individual, small group, and whole-class activities. • SCD.2g: Allocates appropriate instructional time for skill development and mastery, adding modifications as needed.

Skill Categories	Description	Performance Indicator(s)
<p>SCD.3 Implementing instruction^{18-22,24,36,37,40,44,46,48-50,61}</p>	<p>Teacher delivers instruction that is guided by, and focused on, student's achievement of learning objectives, skill development and proficiency, and health behavior outcomes.</p>	<ul style="list-style-type: none"> • SCD.2h: Recognizes and addresses variation in student learning styles and preferences. • SCD.2i: Describes how to differentiate activities to accommodate all learning needs. • SCD.2j: Selects multiple assessment strategies to evaluate student achievement of SLOs and HBOs. • SCD.2k: Identifies short- and long-term support plans for students based on academic and health needs and performance. • SCD.2l: Identifies opportunities in school curriculum to integrate health-related knowledge and skills. • SCD.3a: Clearly states student learning objectives/outcomes (SLO) related to the lesson. • SCD.3b: Clearly states the healthy behavior outcomes (HBO) related to the lesson. • SCD.3c: Demonstrates preparedness to deliver lesson. • SCD.3d: Appears knowledgeable about the health-related topic. • SCD.3e: Demonstrates comfort and confidence with health-related topics, skills, and instructional activities. • SCD.3f: Actively listens to students during the lesson. • SCD.3g: Makes eye contact with students. • SCD.3h: Demonstrates flexibility and responsiveness during instruction. • SCD.3i: Uses correct terms and vocabulary throughout the lesson. • SCD.3j: Uses technology fluently and in pedagogically appropriate ways. • SCD.3k: Provides clear instructions throughout the lesson. • SCD.3l: Allows enough time for activities and discussions. • SCD.3m: Paces lesson appropriately, beginning and ending on time. • SCD.3n: Uses intentional and efficient methods for transitioning from one activity to the next (eg activity timers). • SCD.3o: Uses a variety of questioning techniques to engage all students. • SCD.3p: Asks open-ended questions to stimulate critical thinking and discussion. • SCD.3q: Provides medically accurate information throughout the lesson and in answers to all student questions. • SCD.3r: Provides developmentally and culturally responsive information throughout the lesson and in answers to all student questions. • SCD.3s: Answers sensitive questions using medically accurate, developmentally, and culturally responsive responses. • SCD.3t: Connects lesson to realistic and relevant information that reflect students' lived experiences. • SCD.3u: Explains the relationship of the current lesson to previous lessons. • SCD.3v: Ensures lesson content and skills reinforce the practice and adoption of specific behaviors needed for HBO. • SCD.3w: Discusses the importance and relevance of health skills. • SCD.3x: Models appropriate skill progression/steps for students. • SCD.3y: Provides an opportunity for students to practice/rehearse skills. • SCD.3z: Provides feedback to students on their practice of skills. • SCD.3aa: Uses a variety of strategies and interactive methods (eg group activities, role-play, gamification, individual reflection, or partner sharing) to encourage personalization and transfer, and prompt personal reflection. • SCD.3bb: Adds specific lesson modifications or adaptations for individual students. • SCD.4a: Selects, develops, or adapts a variety of strategies to assess knowledge and skills aligned with student learning and health behavior objectives/outcomes (SLO/HBO). • SCD.4b: Provides students with performance-based feedback. • SCD.4c: Analyzes assessment results and determines necessary changes to instruction. • SCD.4d: Establishes clearly defined criteria and standards for evaluating student performance. • SCD.4e: Applies formative and summative assessments techniques when appropriate. • SCD.4f: Engages students in self-assessment to promote awareness of learning and goal setting for academic performance. • SCD.4g: Adjusts lessons to meet on-going student needs and learning. • SCD.5a: Conducts self-assessment of teaching practices. • SCD.5b: Dedicates time to reflect on lesson delivery. • SCD.5c: Identifies strengths and areas for improvement within lesson delivery. • SCD.5d: Seeks feedback on teaching practices from external and unbiased observers, including students. • SCD.5e: Revises teaching practices based on self, observer, or student feedback and evaluation.
<p>SCD4. Evaluating student performance^{18-22,24,40,44,46-48,50}</p>	<p>Teacher develops, selects, and uses assessment instruments that are instructionally aligned and appropriate to the learning and appropriate to the learning outcomes being evaluated.</p>	<ul style="list-style-type: none"> • SCD.3: Provides developmentally and culturally responsive information throughout the lesson and in answers to all student questions. • SCD.3s: Answers sensitive questions using medically accurate, developmentally, and culturally responsive responses. • SCD.3t: Connects lesson to realistic and relevant information that reflect students' lived experiences. • SCD.3u: Explains the relationship of the current lesson to previous lessons. • SCD.3v: Ensures lesson content and skills reinforce the practice and adoption of specific behaviors needed for HBO. • SCD.3w: Discusses the importance and relevance of health skills. • SCD.3x: Models appropriate skill progression/steps for students. • SCD.3y: Provides an opportunity for students to practice/rehearse skills. • SCD.3z: Provides feedback to students on their practice of skills. • SCD.3aa: Uses a variety of strategies and interactive methods (eg group activities, role-play, gamification, individual reflection, or partner sharing) to encourage personalization and transfer, and prompt personal reflection. • SCD.3bb: Adds specific lesson modifications or adaptations for individual students.
<p>SCD 5. Reflecting on teaching practice^{18,19,21,22,40,44,46}</p>	<p>Teacher reflects on teaching practices, adjusting content and pedagogical strategies as needed, to enhance student learning and performance.</p>	<ul style="list-style-type: none"> • SCD.4a: Selects, develops, or adapts a variety of strategies to assess knowledge and skills aligned with student learning and health behavior objectives/outcomes (SLO/HBO). • SCD.4b: Provides students with performance-based feedback. • SCD.4c: Analyzes assessment results and determines necessary changes to instruction. • SCD.4d: Establishes clearly defined criteria and standards for evaluating student performance. • SCD.4e: Applies formative and summative assessments techniques when appropriate. • SCD.4f: Engages students in self-assessment to promote awareness of learning and goal setting for academic performance. • SCD.4g: Adjusts lessons to meet on-going student needs and learning. • SCD.5a: Conducts self-assessment of teaching practices. • SCD.5b: Dedicates time to reflect on lesson delivery. • SCD.5c: Identifies strengths and areas for improvement within lesson delivery. • SCD.5d: Seeks feedback on teaching practices from external and unbiased observers, including students. • SCD.5e: Revises teaching practices based on self, observer, or student feedback and evaluation.

Collaboration and Learning

Skill Categories	Description	Performance Indicator(s)
SCL 1. Communicating effectively and efficiently ^{18,19,40,45-49,61}	Teacher uses communication strategies to share ideas, information, and concepts in a clear and concise manner.	<ul style="list-style-type: none"> • SCL.1a: Delivers messages using a variety of methods, techniques, and channels. • SCL.1b: Acknowledges and is responsive to different modes of communication. • SCL.1c: Conveys clarity when sharing ideas and information. • SCL.1d: Communicates using verbal, nonverbal, written, and media communication techniques. • SCL.1e: Uses I-statements during oral and written communication.
SCL 2. Engaging stakeholders and priority populations ^{18-21,36,40,48,61}	Teacher works collaboratively with school staff, parents/caregivers, and community partners to enhance students' health and learning.	<ul style="list-style-type: none"> • SCL.2a: Recruits diverse stakeholders to support health education programs. • SCL.2b: Engages students, parents/caregivers and families, school staff, and community partners in health education decision-making. • SCL.2c: Participates in school, district, or community councils invested in improving students' health (eg School Health Advisory Council, district/school wellness teams). • SCL.2d: Establishes respectful and productive relationships with school, parents/caregivers and families, and community partners. • SCL.2e: Consults with other teachers, school staff and administrators, and parents/caregivers and families about individual student needs.
SCL 3. Giving and receiving feedback ^{40,46}	Teacher actively seeks and is receptive to feedback that improves their instructional practice.	<ul style="list-style-type: none"> • SCL.3a: Asks for help from students, other teachers, and school staff and administrators to solve problems and foster critical thinking. • SCL.3b: Exhibits willingness to receive feedback from students, peers, school staff and administrators, or parents/caregivers and families. • SCL.3c: Offers timely, constructive, and practical feedback to students, peers, school staff and administrators, or parents/caregivers and families. • SCL.3d: Actively shares insights, experiences, and reflections about teaching health education.
SCL 4. Participating in professional learning ^{19,20,22,24,40,46,50}	Teacher participates in on-going learning opportunities aligned with their professional needs and responsibilities.	<ul style="list-style-type: none"> • SCL.4a: Plans health lessons, units, or courses with other teachers (eg grade-level teams). • SCL.4b: Actively participate in professional learning to improve current and future teaching practice. • SCL.4c: Uses professional learning communities or networks to support practice of self and others. • SCL.4d: Implements new pedagogical concepts or strategies learned in training to classroom delivery. • SCL.4e: Acts as a coach or mentor to other teachers and school staff. • SCL.4f: Receives coaching or mentoring from other teachers, school staff, or community partners. • SCL.4g: Reads current events and media, peer-reviewed research, and trends in the field of general education and school health to improve instruction.

Abbreviations: SLE = Skill, learning environments. SCD = Skill, content and delivery. SCL = Skill, collaboration and learning.