

Enhancing Graduate Practicum Project Development and Selection at Schools of Public Health: A Case Study

Kristen Cribbs, MPH¹, Susanna Lynch, MEd¹, Marita LaMonica, MPH¹,
Chioma Amadi, MPH¹, and Ashish Joshi, PhD, MBBS, MPH¹

Pedagogy in Health Promotion: The
Scholarship of Teaching and Learning
1-7

© 2019 Society for Public
Health Education

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/2373379919842232

journals.sagepub.com/home/php



Abstract

Experiential learning is a core competency of curricula across accredited U.S. schools of public health, helping students to hone diverse skill sets that will enable them to readily join the workforce and contribute to solving complex public health problems. At the City University of New York (CUNY) Graduate School of Public Health and Health Policy (SPH), all master's and doctoral students are required to complete a practicum during their degree programs; yet practicum development and selection processes are often overlooked. To enhance the experiential learning program and Human Research Protection Program processes surrounding student practica at the CUNY SPH, researchers mined an administrative database and analyzed characteristics of practicum projects undertaken by graduate students. Findings from this novel study will facilitate policy and procedural changes within the SPH Office of Experiential Learning, which oversees the practicum program, and across SPH offices, including the Human Research Protection Program, to promote an optimal, student-centered practicum experience. Additionally, these analyses will serve as a model for other schools of public health seeking to develop, refine, and strengthen their practicum programs.

Keywords

experiential learning, public health graduate students, practicum development and selection processes, higher education administration

Since a seminal 2003 Institute of Medicine report advocating the integration of ecological approaches into public health education to advance public health literacy, experiential learning has become a core competency of curricula across accredited U.S. schools of public health (Gebbie, Rosenstock, Hernandez, & Institute of Medicine, 2003). Experiential learning describes learning undertaken by students that involves the acquisition and application of knowledge and skills in a proximate and relevant setting (Cashman & Seifer, 2008).

As Cashman and Seifer (2008) discuss, the integration of experiential learning into the educational process was championed by prominent educational philosophers and theorists, such as John Dewey, Kurt Hahn, and Paulo Freire, who believed that the ultimate aim of education was to foster an active citizenry. The promotion of student experiences in education was thus perceived as a means to enhance students' capacity to participate in democracy (Kolb, 1984). In the present day, the prioritization of experiential learning in professional education is particularly evident among health professions, with

many health professions, such as medicine, nursing, pharmacy, exercise science, and public health, requiring their preprofessionals to engage in internships, practica, fieldwork, or clinical rotations (Brown, Heaton, & Wall, 2007; Gregorio, DeChello, & Segal, 2008; de Groot, Alexander, Culp, & Keith, 2015; Meurer et al., 2011; Montgomery & Johnson, 2015).

In schools of public health, experiential learning bridges public health theory and practice, providing students with structured opportunities to engage with, reflect on, and contextualize broader social, economic, and political dimensions of health that are encountered in the classroom and academic readings. Increasing demands from industry and employers require that public health graduates possess diverse skill sets that will

¹City University of New York, New York, NY, USA

Corresponding Author:

Kristen Cribbs, CUNY Graduate School of Public Health, 55 West 125th Street, New York 10027, USA.

Email: kristen.cribbs@sph.cuny.edu

enable them to readily join the workforce and contribute to solving complex public health problems (Millican & Bourner, 2011; Sullivan, Velez, Edouard, & Galea, 2018). Skills such as teamwork, communication, self-management, and analytical and critical thinking are largely honed through exposure to professional practice settings and are valued by employers and students alike (Caballero & Walker, 2010; Hager & Holland, 2007; Messum, Wilkes, & Jackson, 2015; Pau & Mutalik, 2017; Walker et al., 2013). The benefits of experiential learning extend beyond the student, however, allowing for relationships between universities, local agencies and organizations, and communities to be forged and strengthened (Bill & Casola, 2016; Ward & Wolf-Wendel, 2000). The establishment of these multi- and interprofessional partnerships can facilitate the realization of mutual goals while promoting health and health equity.

At the City University of New York (CUNY) Graduate School of Public Health and Health Policy (SPH), all graduate students (e.g., Master of Public Health [MPH], Master of Science [MS], and Doctor of Public Health [DPH]) engage in experiential learning via a required practicum course during their degree program. Offered in the fall, spring, and summer terms, the 180-hour minimum practicum requirement is intended to help students develop diverse competences, including expanding professional practice capabilities, enhancing work readiness and employability, and building confidence. Yet, as students seek to fulfill prescribed requirements during brief time frames (often during one semester or during the summer), practicum development and selection processes are often overlooked. This study aimed to explore the characteristics of practicum projects at the CUNY SPH (e.g., practicum site type, key focus areas, skills derived) to enhance the student practicum experience.

The CUNY SPH Practicum Experience

At the CUNY SPH, the practicum program is overseen by the Office of Experiential Learning (OEL). OEL works with SPH students and community members to establish practicum opportunities and ensure that projects fulfill the Council on Education for Public Health (CEPH) requirements for applied and experiential learning.¹ As the arbiter of regulatory and administrative oversight of human subjects research (HSR)² conducted by faculty, staff, and students across the CUNY SPH, the SPH Human Research Protection Program (HRPP) also plays an important role in ensuring efficient and transparent practicum development processes.

SPH HRPP Practicum Requirements

Graduate students are required to provide information about their proposed practicum projects to the SPH HRPP

office on enrolling in the practicum course. They do so via completion of the SPH HRPP HSR Assessment Form (a Qualtrics form), which enables the HRPP office to determine whether proposed projects constitute HSR (and require institutional review board [IRB] approval), thus promoting researcher compliance with the federal Department of Health and Human Services and Food and Drug Administration (FDA) HSR regulations. Students must receive a formal HSR decision from the HRPP office (and IRB approval, if necessary) before beginning their work.

HSR Determination Process

The first step in the multiphase HSR determination process is a student's completion of the HSR Assessment Form. Through closed- and open-ended questions, the form captures self-reported information from researchers about their role (e.g., student, faculty, staff), degree program (e.g., MPH, MS, DPH), department (e.g., Community Health and Social Sciences [CHASS], Health Policy and Management [HPAM], Environmental and Occupational Health Sciences [EOHS], Epidemiology and Biostatistics [EPI/BIOS], and Public Health Nutrition [PH NUTR]), and proposed practicum project. Responses are populated into an administrative SPH HRPP database in which additional information, such as HSR determination and decision date, is also tracked. Next, the HRPP office reviews the student's entry and makes one of two determinations: (1) the project qualifies as HSR and IRB approval is needed prior to commencement or (2) the project does not qualify as HSR and the student may begin the work. Finally, the HRPP office issues its HSR determination to the student and provides guidance on next steps. Only authorized HRPP staff have access to this secure database.

Methodology

Based on a systematic literature review, this appears to be the first published empirical study to mine an administrative database in order to investigate graduate student practicum characteristics at a school of public health. This exploratory study aimed to assess the below key research questions by analyzing practicum student SPH HRPP HSR Assessment Form entries during the study period (January 1, 2017, through June 30, 2018):

Research Question 1: What topic areas were most common among practicum students?

Research Question 2: What types of skills were most anticipated among practicum students?

Research Question 3: How many students intended to conduct HSR during their practica (following receipt of an HSR determination during the study period)?

Research Question 4: How did practicum project characteristics align with CEPH competencies?

Target Population

The population of interest for this study was master's (MPH and MS) and doctoral students (DPH) at the CUNY SPH who were enrolled in the practicum course from January 1, 2017, through June 30, 2018, and successfully completed the HSR determination process during that time frame (i.e., submitted a SPH HRPP HSR Assessment Form entry and received an HSR determination from the SPH HRPP office).

Data Source

Retrospective data for cases that met the above inclusion criteria were extracted from the SPH HRPP HSR Assessment Form database and stripped of all identifying information, including names, university ID numbers, and e-mail addresses. As earlier mentioned, the database captures information about proposed SPH student, faculty, and staff projects. Supplemental Appendix B (available in the online version of this article) contains extracted database variables. The extracted database is available upon request from the researchers.

Analytic Strategy

Analyses involved a mixed-methods approach. Bivariate descriptive statistics were first conducted to characterize the sample and practicum projects. The researchers subsequently employed conventional content analysis, a qualitative approach that aims to systematically transform text into categories or themes as a means to uncover manifest and latent meaning (Ritchie & Lewis, 2014). During content analysis, the researchers reviewed the following open-ended database text fields in order to distill critical information about student practicum projects: project title, project description, description of interaction/intervention with human subjects, description of identifiable private information to be obtained, and investigator role. From this iterative process, a set of prevailing, representative themes were created pertaining to practicum site type, key focus areas, and skills derived. These themes were then entered into an analytical database (Supplemental Appendix C, available in the online version of this article). The researchers independently conducted content analysis to ensure interrater reliability regarding derived themes, and consensus was reached prior to theme finalization. Quantitative analysis was subsequently conducted to examine relations between select variables of interest. Findings from content and quantitative analyses are discussed in further detail below. These activities were determined to be exempt from IRB review by the CUNY IRB.

Table 1. Sample and Practicum Project Characteristics ($n = 199$).

Variable	n (%)
Degree program	
DPH	11 (6)
MPH	181 (91)
MS	7 (3)
Department	
CHASS	55 (28)
HPAM	49 (25)
EOHS	38 (19)
EPI/BIOS	36 (18)
PH NUTR	21 (10)
Practicum site type	
For profit	6 (3)
Nonprofit	58 (29)
Government agency	46 (23)
Hospital/clinic	42 (21)
University	47 (24)
HSR decision	
HSR	37 (19)
Non-HSR	162 (81)
Semester	
Spring 2017	30 (15)
Summer 2017	57 (29)
Fall 2017	33 (16)
Spring 2018	44 (22)
Summer 2018	35 (18)

Notes. DPH = Doctor of Public Health; MPH = Master of Public Health; MS = Master of Science; CHASS = Community Health and Social Sciences; HPAM = Health Policy and Management; EOHS = Environmental and Occupational Health Sciences; EPI/BIOS = Epidemiology and Biostatistics; PH NUTR = Public Health Nutrition; HSR = human subjects research.

Findings

The final sample included 199 student practica cases, the majority ($n = 181$, 91%) of whom were MPH students. Five extracted cases were deemed ineligible for inclusion in the final sample due to students disenrolling in the practicum course. Most cases were students in the CHASS department ($n = 55$, 28%), followed by HPAM ($n = 49$, 25%), EOHS ($n = 38$, 19%), EPI/BIOS ($n = 36$, 18%), and finally PH NUTR ($n = 21$, 10%). The researchers identified five practicum site types during analyses: three "high-level" sectors (e.g., nonprofit, for profit, and government) and two subsets of these sectors (e.g., hospitals/clinics and universities). For the purposes of this study, these five site types were considered distinct, and each of the 199 cases was assigned a representative site type that aligned with the stated or described setting. Results revealed that the majority of students completed their practica at nonprofit organizations ($n = 58$, 29%), universities ($n = 47$, 24%), government agencies ($n = 46$, 23%), or hospitals

Table 2. Primary Practicum Focus Areas by Department.

Department	Total focus area by department, <i>n</i>	Primary focus area	Primary focus area by department, <i>n</i> (%)
CHASS	65	Noncommunicable diseases	10 (15)
HPAM	57	Infectious disease	8 (14)
EOHS	46	Environmental hazards	10 (22)
EPI/BIOS	41	MCSRH	9 (22)
PH NUTR	22	Food and nutrition	6 (27)

Notes. CHASS = Community Health and Social Sciences; HPAM = Health Policy and Management; EOHS = Environmental and Occupational Health Sciences; EPI/BIOS = Epidemiology and Biostatistics; PH NUTR = Public Health Nutrition; MCSRH = Maternal, Child, Sexual, and Reproductive Health.

Table 3. Primary Anticipated Practicum Skill by Department.

Department	Total skill by department, <i>n</i>	Primary focus area	Primary skill by department, <i>n</i> (%)
CHASS	120	Quantitative data collection; quantitative data analysis	16 (13; both skills)
HPAM	122	Quantitative data analysis	21 (17)
EOHS	72	Environmental assessment	16 (22)
EPI/BIOS	75	Quantitative data analysis	24 (32)
PH NUTR	59	Quantitative data collection; quantitative data analysis	11 (19; both skills)

Notes. CHASS = Community Health and Social Sciences; HPAM = Health Policy and Management; EOHS = Environmental and Occupational Health Sciences; EPI/BIOS = Epidemiology and Biostatistics; PH NUTR = Public Health Nutrition.

/clinics ($n = 42$, 21%), with only 3% ($n = 6$) doing so at a for-profit organization. Ultimately, most projects were determined not to be HSR ($n = 162$, 81%) by the SPH HRPP office. Sample and practicum project characteristics are included in Table 1.

Following content analyses of open-ended, descriptive text responses from students about their projects, 46 distinct practicum focus area themes were derived, with 231 areas assigned to the 199 cases, as some student entries discussed more than one focus area (Supplemental Appendix D, available in the online version of this article). There were clear focal patterns across departments. For example, a large proportion of student practica pertained to *Maternal, Child, Sexual, and Reproductive Health* ($n = 29$, 13%); however, this area was more common among CHASS ($n = 9$), EPI/BIOS ($n = 9$), and HPAM ($n = 7$) students, as opposed to those in the EOHS ($n = 2$) and PH NUTR ($n = 2$) departments. Other common focus areas included *non-communicable diseases* ($n = 23$, 10%), *infectious diseases* ($n = 22$, 10%), and *health behaviors/education* ($n = 15$, 6%). CHASS students comprised the largest proportion of students focusing on noncommunicable diseases and health behaviors/education ($n = 10$ and $n = 7$, respectively), while HPAM students were the most likely to focus on infectious diseases ($n = 8$, 36%). Table 2 depicts primary focus areas by department.

Analyses also illuminated the various types of skills students anticipated utilizing during their practica. The same iterative content analysis process used to derive a list of common project focus areas from open-ended practicum descriptions was employed to identify 33 prevailing skills. As several student entries discussed more than one skill, 448 distinct skills were assigned to the 199 cases (Supplemental Appendix E, available in the online version of this article). The most frequently cited skill was *quantitative data analysis* ($n = 82$, 18%), followed by *quantitative data collection* ($n = 65$, 15%). These skills were most often referenced by EPI/BIOS, HPAM, and CHASS students. Many students across departments also mentioned plans to conduct *qualitative data collection* ($n = 38$, 8%) and *literature reviews* ($n = 34$, 8%). Additionally, a fair number of students discussed anticipated engagement in programmatic work (*development*, $n = 21$, 5%, and *evaluation*, $n = 22$, 5%) or a *public health intervention* ($n = 13$, 3%). Less commonly cited skills included *clinical mapping*, *data mapping*, *GIS mapping*, *needs assessments*, and *grant writing* ($n = 1$, 0.002% for all), as well as *study design*, *policy development*, and *project coordination* ($n = 2$, 0.004% for all). Furthermore, while most referenced skills were evenly distributed across departments, others were clustered. For example, *environmental assessment* was cited 17 times, 16 (94%) of which were by EOHS students. Table 3 depicts primary anticipated skills by department.

Discussion and Conclusion

Findings from this study shed light on the nature of student practica at the CUNY SPH, including the types of organizations at which students are working, HSR engagement, and common project focal areas and anticipated skills. The vast majority of students did not engage in HSR to fulfill their practica. This is likely due to factors such as lack of awareness or access to HSR projects (at the SPH or external organizations) and time constraints (e.g., related to obtaining IRB approval or completing practicum deliverables in course time frame). However, the fact that many students anticipated engaging in quantitative data collection and analysis and qualitative data analysis suggests that these important public health methods competencies are being exercised through non-HSR projects, such as quality improvement projects and de-identified data analyses.

Engagement in research activities provides students with critical opportunities to refine statistical and research methods skills gained in the classroom while addressing pressing public health issues. The Committee on Educating Public Health Professionals for the 21st Century emphasized that the next generation of public health professionals should understand the importance of transdisciplinary public health research that focuses on secondary prevention as well as the evaluation of public health systems, practice approaches and interventions, and effective collaborations with diverse communities (Gebbie et al., 2003). This position is reinforced by CEPH (2016), which requires public health graduate students to demonstrate competency in evidence-based approaches to public health, interprofessional practice, and systems thinking as they pertain to research methods. To that end, concerted effort should be made by the SPH OEL to carefully review transdisciplinary HSR practicum opportunities as well as non-HSR practicum opportunities that are research-oriented. When possible, those opportunities should integrate an ecological approach to understanding the multiple determinants of health. To facilitate increased student engagement in research-related practica, greater understanding is needed of why this student population is less likely to pursue HSR for their practica, barriers to doing so, and what supports students need to pursue HSR and research-oriented non-HSR work.

Reviewing student practicum placement, there is high student engagement at nonprofit, government, hospital/clinic, and university entities but not at for-profit organizations. Exposure to public health practice and research in more traditional settings is undoubtedly important for students' professional development. However, in recent decades, there has become an increased recognition and acceptance of the role of the private sector in the development of health initiatives to catalyze and sustain advancements in population health, particularly in the

global development space (Sturchio & Goel, 2012). While some are skeptical of business involvement in health promotion efforts, the growing trend toward public-private partnerships to address emergent health risks is undeniable and requires competent public health practitioners in leadership, management, and supervisory roles across sectors. Furthermore, the response of public health agencies to complex health issues is increasingly perceived as inadequate, with shortcomings attributable to stagnant funding streams and outdated public health planning frameworks (Lister et al., 2017). Some public health practitioners have advocated for a renewed public health framework that maximizes public sector strengths while incorporating successful processes from the private sector (e.g., design thinking, emphasis on program outcomes) to more adequately and readily address critical public health issues. Thus, developing a cadre of public health graduate students with private sector experience can promote effective public-private partnerships while yielding positive spillover effects in the public sector. While conventional placement opportunities should be encouraged and developed, the OEL should also seek to forge relationships with for-profit organizations to encourage learning in these types of settings. To inform these efforts, it would be valuable to obtain greater insight into why students pursued practica at particular types of settings and whether there were any barriers to securing alternatively desired placements.

Analyses revealed prevailing practicum focus areas and anticipated skills. Most focus areas were evenly distributed across departments, with maternal, child, sexual, and reproductive health, noncommunicable disease, infectious disease, and health behaviors/education being the most common. Relatedly, quantitative data collection and analysis, qualitative data collection, and literature reviews were among the most frequently cited skills. Comparatively fewer students engaged in policy work (analysis or development) and research methods, such as participant outreach and recruitment.

Various interprofessional working groups have identified key skill-based domains of importance for public health professionals. The National Consortium for Public Health Workforce Development, for example, identified eight high-performance skills that they deemed essential for the public health workforce, regardless of specialty or discipline: systems thinking, change management, persuasive communication, data analytics, problem solving, diversity and inclusion, resource management, and policy engagement (deBeaumont Foundation, 2017). Similarly, the Council on Linkages Between Academia and Public Health Practice recommended that public health practitioners be adept in the following competencies: analytical/assessment, policy development/program planning, communication, cultural competency, community dimensions of practice, public health sciences,

financial planning and management, leadership, and systems thinking (Public Health Foundation, 2014). Such skill sets are supported by CEPH (2016), which requires students to develop competency in, among other areas, leadership, communication, systems thinking, and planning and management to promote health.

The practicum course is a critical opportunity for students to gain tangible practice and research-based public health skills during graduate training. To ensure that the range of available practicum placements align with student interests, departmental competencies, and evolving public health industry needs, it would be worthwhile to assess whether the focus areas and skill trends identified in this study adequately reflect those that are desired by students, departments, and industry leaders/employers. Relatedly, as dozens of focus areas and skills were referenced only a few times (e.g., immigrant health, health care informatics, clean energy, policy work, grant writing, and mapping), it would be beneficial to better understand the degree of student interest in these areas, as well as the quantity and quality of placements available to support these interests.

Although this study provided a valuable baseline assessment of the types and nature of graduate student practica at the CUNY SPH, as retrospective administrative data that were originally collected for another purpose (e.g., HSR determination tracking) were used, not all relevant information about student practica was available for analysis. Future mixed-methods research is needed to further contextualize student practica. It would be beneficial to administer surveys and conduct focus groups or interviews with diverse cross-sections of graduate SPH students to learn more about why students select certain placements, how these placements align with their interests, and what practicum-related skills are desired.

This appears to be the first empirical study to mine an administrative database as a means to explore graduate student practicum characteristics at a school of public health. The study illustrates the importance and utility of cross-departmental collaboration in leveraging administrative data to explore graduate student practicum selection processes. Findings will aid the HRPP, OEL, and other SPH administrative offices in developing more targeted practicum assessments, resources, and supports. Yet implications of these findings also extend beyond the CUNY SPH. Implementing, and subsequently analyzing data from, administrative practicum tracking systems, such as the HRPP HSR Assessment Form, can facilitate a better understanding of the characteristics of practicum placements and opportunities for targeted process intervention. Efforts to enhance student practicum development and selection processes at graduate schools of public health will lead to improved outcomes at multiple levels. Such efforts will promote greater student satisfaction, as students gain desired skills and professional

connections, as well as exposure to varied professional settings and access to future work opportunities. Relatedly, preceptors will secure candidates who possess the expertise and competencies needed to meet project deliverables, thus improving their satisfaction and potentially resulting in the establishment of a pipeline for students from practicum to extended internship or employment. Schools of public health will also derive benefits, as new partnerships are forged with external organizations to support student placements. Finally, these efforts will have positive upstream effects on the public health field, as emerging public health practitioners will gain valuable knowledge and skills that will equip them to meet evolving industry needs upon entering the workforce.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Notes

1. 2016 CEPH criteria for MPH and DPH applied practice experiences can be found here: https://storage.googleapis.com/media.ceph.org/wp_assets/2016.Criteria.pdf
2. Per federal regulations and CUNY policy, for a project to be considered HSR, the below criteria must be met:
 - a. The investigator is conducting research or clinical investigation.
 - b. The proposed research or clinical investigation involves human subjects.
 - c. CUNY is engaged in the research or clinical investigation involving human subjects.

Relevant HSR definitions are included in Supplemental Appendix A (available in the online version of this article). Investigators conducting HSR must satisfy federal Department of Health and Human Services regulations (45 CFR [Code of Federal Regulations] Part 46) and FDA regulations (21 CFR Parts 50 and 56) regarding the protection of human research participants, as applicable.

Supplemental Material

Supplemental Appendices A–E are available in the online version of this article at <https://journals.sagepub.com/home/php>.

References

- Bill, D., & Casola, A. (2016). Developing, implementing, and evaluating a Latino service learning project in an accelerated MPH community health course for health education students. *Pedagogy in Health Promotion*, 2, 184-192. doi:10.1177/2373379916633716

- Brown, B., Heaton, P. C., & Wall, A. (2007). A service-learning elective to promote enhanced understanding of civic, cultural, and social issues and health disparities in pharmacy. *American Journal of Pharmaceutical Education, 71*, 9.
- Caballero, C. L., & Walker, A. (2010). Work readiness in graduate recruitment and selection: A review of current assessment methods. *Journal of Teaching and Learning for Graduate Employability, 1*, 13-25. doi:10.21153/jtlge2010vol1no1art546
- Cashman, S. B., & Seifer, S. D. (2008). Service-learning. *American Journal of Preventive Medicine, 35*(3), 273-278. doi:10.1016/j.amepre.2008.06.012
- Council on Education for Public Health. (2016). *Accreditation criteria: Schools of public health & public health programs*. Silver Spring, MD: Author. Retrieved from https://storage.googleapis.com/media.ceph.org/wp_assets/2016.Criteria.pdf
- deBeaumont Foundation. (2017). *Building skills for a more strategic public health workforce: A call to action*. Retrieved from <http://www.debeaumont.org/building-skills-for-a-more-strategic-health-workforce-a-call-to-action>
- de Groot, M., Alexander, K., Culp, B., & Keith, N. (2015). Experiential learning in kinesiology: A student perspective. *Pedagogy in Health Promotion, 1*, 123-133. doi:10.1177/2373379915594391
- Gebbie, K. M., Rosenstock, L., Hernandez, L. M., & Institute of Medicine. (Eds.). (2003). *Who will keep the public healthy? Educating public health professionals for the 21st century*. Washington, DC: National Academies Press.
- Gregorio, D. I., DeChello, L. M., & Segal, J. (2008). Service learning within the University of Connecticut Master of Public Health Program. *Public Health Reports, 123*(Suppl. 2), 44-52. doi:10.1177/00333549081230S207
- Hager, P., & Holland, S. (Eds.). (2007). *Graduate attributes, learning and employability* (Vol. 6). Dordrecht, Netherlands: Springer Netherlands. doi:10.1007/1-4020-5342-8
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Lister, C., Payne, H., Hanson, C. L., Barnes, M. D., Davis, S. F., & Manwaring, T. (2017). The public health innovation model: Merging private sector processes with public health strengths. *Frontiers in Public Health, 5*, 192. doi:10.3389/fpubh.2017.00192
- Messum, D., Wilkes, L., & Jackson, D. (2015). What employability skills are required of new health managers? *Asia Pacific Journal of Health Management, 10*, 28-35.
- Meurer, L. N., Young, S. A., Meurer, J. R., Johnson, S. L., Gilbert, I. A., & Diehr, S. (2011). The urban and community health pathway. *American Journal of Preventive Medicine, 41*(4 Suppl. 3), S228-S236. doi:10.1016/j.amepre.2011.06.005
- Millican, J., & Bourner, T. (2011). Student-community engagement and the changing role and context of higher education. *Education + Training, 53*(2-3), 89-99. doi:10.1108/00400911111115645
- Montgomery, M., & Johnson, P. (2015). Increasing nursing students' knowledge of health promotion through community engagement. *Pedagogy in Health Promotion, 1*, 153-157. doi:10.1177/2373379915577964
- Pau, A., & Mutalik, V. S. (2017). Experiential learning in community oral health promotion: A qualitative evaluation of the experiential aspects. *Pedagogy in Health Promotion, 3*, 108-114. doi:10.1177/2373379916655356
- Public Health Foundation. (2014). *Core competencies for public health professionals*. Retrieved from http://www.phf.org/resourcestools/Documents/Core_Competencies_for_Public_Health_Professionals_2014June.pdf
- Ritchie, J., & Lewis, J. (Eds.). (2014). *Qualitative research practice: A guide for social science students and researchers* (2nd ed.). London, England: Sage.
- Sturchio, J., & Goel, A. (2012). *The private-sector role in public health: Reflections on the new global architecture in health*. Washington, DC: Center for Strategic and International Studies. Retrieved from https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/120131_Sturchio_PrivateSectorRole_Web.pdf
- Sullivan, L. M., Velez, A., Edouard, V. B., & Galea, S. (2018). Realigning the Master of Public Health (MPH) to meet the evolving needs of the workforce. *Pedagogy in Health Promotion, 4*, 301-311. doi:10.1177/2373379917746698
- Walker, A., Yong, M., Pang, L., Fullarton, C., Costa, B., & Dunning, A. M. T. (2013). Work readiness of graduate health professionals. *Nurse Education Today, 33*, 116-122. doi:10.1016/j.nedt.2012.01.007
- Ward, K., & Wolf-Wendel, L. (2000). Community-centered service learning: Moving from doing for to doing with. *American Behavioral Scientist, 43*, 767-780. doi:10.1177/00027640021955586