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Soft skills in health careers programs: a case study of a regional vocational technical high school

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BOSTON UNIVERSITY
SCHOOL OF EDUCATION

Dissertation

**SOFT SKILLS IN HEALTH CAREERS PROGRAMS: A CASE STUDY OF
A REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL**

by

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DEDICATION

To my parents, Soonim Yoon and Sangchul Park.

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ABSTRACT

The purpose of this study is to develop an understanding of the ways in which educational experiences might differ between a regional vocational technical high school (RVTH) and short-term career-training programs. A particular regional vocational technical high school was selected for its outstanding academic records and placement rates, and a particular industry--healthcare--was chosen for its high demand and short supply of labor in the state. The study is a qualitative case study that primarily utilized in-depth, one-on-one interviews with semi-structured questions. The participants of this study fall into one of three groups: seniors in RVTH health services, students in the RVTH postsecondary practical nursing (PN) program, and certified nursing assistants (CNAs) who received CNA training from short-term career-training programs in Massachusetts. The researcher collected additional qualitative data through various sources such as classroom observation, field notes, program descriptions, lesson plans, syllabi, and class materials. The interview data were transcribed, segmented, and coded; any relevant qualitative data were later added to supplement the interview data. There were four consistent areas raised across participants that suggest salient components of their experiences. First, school choice was made by students themselves in the cases of

RVTH seniors, which might have influenced the culture of togetherness and acceptance at RVTH. Second, shop instructors played an important role in creating a school culture where students helped each other and accepted everyone. In particular, the instructors' emotional support seemed to differentiate the educational experiences of RVTH seniors from the students in other programs. Third, all RVTH seniors frequently identified soft skills such as communication and time-management skills when reflecting on their education experiences whereas participants in the short-term programs focused on technical skills. Lastly, RVTH seniors strongly believed they were career-ready. The findings of the current research on the workplace skills students acquired in the programs showed some congruencies with the existing inter-industry literature that described the importance of certain skills, such as communication and professionalism. Participants from alternative career-training programs did not identify the same types of elements in their educational experiences. The study ends with implications by contemplating what aspects of RVTH can be replicated in which settings.

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LIST OF ABBREVIATIONS

CCSS.....	Common Core State Standards
CNA.....	Certified Nursing Assistant
CTE.....	Career Technical Education
CVTE.....	Career Vocational Technical Education
DESE.....	Department of Elementary and Secondary Education
HS.....	Health Services
IRB.....	Institutional Review Board
LPN.....	Licensed Practical Nursing
MCAS.....	Massachusetts Comprehensive Assessment System
NCLEX.....	National Council Licensing Examination
PN.....	Practical Nursing
RN.....	Registered Nurse
RVTH.....	Regional Vocational Technical High School
STEM.....	Science, Technology, Engineering, and Mathematics
VTE.....	Vocational Technical Education

GLOSSARY

- Career pathways: “the route and approach that can be taken by someone wishing to develop their career within a given profession” (UK Civil Service, 2011)
- Career readiness: Massachusetts defines college and career readiness as demonstrating “the knowledge, skills, and abilities ... in order to successfully complete entry-level, credit-bearing college courses, participate in certificate or workplace training programs, and enter economically viable pathways” (Massachusetts Department of Higher Education, 2014, p. 6).
- Skill mismatch: an assertion that “workers lack the skills that employers demand, resulting in an economically damaging skill gap” (Weaver, 2013, p. 2)
- Soft skills: “important job-related skills that involve little or no interaction with machines and whose application on the job is quite generalized,” such as “responsibility and punctuality, the ability to communicate and cooperate, workmanship, persistence” (Rose, 2012, p. 105; Whitmore & Fry, 1974, p. 3).
- Vocational education: “a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life” (UNESCO, 2001, p. 28)
- Vocational Technical Education: VTE prepares students for both employment and academic training by integrating academic and vocational education. In

Massachusetts, VTE is also known as Career and Technical Education (CTE) (Fraser, 2008).

- Workplace Skills: “the generic skills desired by employers for employees in order for them to work in an effective manner” (Turner, 2000, p. 26)

CHAPTER ONE

Introduction

Across academia and legislation, there have always been attempts to improve student achievement, resulting in numerous pilot studies, policy changes, and intervention programs. As a result, many of our schools are now required to show gradual improvement in test scores, which is meant to illustrate how our students are performing academically. However, it is questionable whether we have a true holistic understanding of students' educational experience. Within five years of leaving education, one-third of American students have failed to find employment or are otherwise economically inactive (Hoffman, 2011). In 2016, Massachusetts had 73,239 “disconnected youth” who belonged neither to a workplace nor to a school — 8.4 percent of all Massachusetts youths aged sixteen to twenty-four (Opportunity Index, 2016). This might indicate that schools failed to prepare students for college and the workplace. In view of this apparent failure, it is important to understand the nature of the education provided in a school that, by various objective measures, does a good job of preparing students for employment, and in particular to explore the perspective of the students themselves. That is the purpose of the present study.

Across industries, employers complain that schools are not giving students the skills needed in the workplace, including those often described as “soft skills.” Turner (2000) found that oral communication was desired by all participating employers but identified as a weakness workplace skill among recent college graduates. Employers also considered written communication and professionalism important but deficient among

high school graduates (Casner-Lotto, 2006). This gap between employer needs and the skill level of high school students continues to widen (Achieve, 2004; Goldberger & Kazis, 1996). Meanwhile, more and more students in Massachusetts are seeking career technical education (CTE). A recent survey of sixty-six Massachusetts vocational schools found that more than 4,600 students were waiting to be admitted to vocational programs (Ball et al., 2014). High demand for CTE has caused many students to enroll in a school where they may not be happy or motivated to learn and succeed. Why do more and more students and their parents request vocational programs? It is reasonable to think that CTE's strong connection to real-life skills and career development has increased general interest, but the trend requires a closer look.

The unmet demand for vocational programs has recently been “the wave” and “one of the hottest things going” in the commonwealth (Halber, 2016). While scrutinizing the issue from various angles, it is clear that we need to know how to best utilize funding and serve more students. On the other hand, an understanding of why vocational programs are so highly demanded might provide alternative solutions and suggest a better allocation of funds. It is also necessary to understand the educational experience of students in these vocational programs. Together, such knowledge would guide funding and research.

In this introduction, the researcher will discuss the challenges existing in today's labor market and vocational education, as well as the purpose of this study, which focuses on a particular industry and vocational program. It will also offer a glimpse of the research question that will be discussed in detail in chapter 3.

Statement of Problem

According to the 2013 Massachusetts job vacancy survey, the total number of job vacancies in 2013 was 134,539 (4.8 percent of the total number of employed persons) (Massachusetts Executive Office of Labor and Workforce Development, 2016). Although industry structure may differ in Massachusetts than in the nation, with more reliance on higher education, biotechnology, and health care, the issue of job vacancy seems to be situated in a broader context. Anthony Carnevale, director of Georgetown University's Center on Education and the Workforce, blamed the skill mismatch for high unemployment and job vacancy rates in his interview with National Public Radio (Memmott, 2011). Restrepo (2015) also states that employers find it harder to recruit workers due to the mismatch between skill requirements and workers' current skills. Although there is limited evidence for a direct relationship between job vacancy and detailed workplace skills, it is clear that employers complain that job seekers do not have the skills employers require (Kershner, 2008; Quinn, 2013; US Department of Education, 2012). Specifically, employers in the automobile industry were having a hard time finding qualified, skilled technicians and mechanics (Quinn, 2013; VanDalsem, 2010). By interviewing employers, Freund (2013) also found the need for developing skills in the areas of critical thinking and communication for the technicians in the automobile repair technology industry.

Health care has not been explored much as a single target population compared to the automobile industry. However, health care is one of the growing fields in Massachusetts, along with advanced manufacturing and information technology and the

largest employment sector in Boston (Blakely & White, 2013). The importance of the nursing field nationwide has increased with an aging population. Grant (2016) states that there is a high demand for nurses due to an aging population, the rising incidence of chronic disease, and an aging nursing workforce. As a result, nursing is one of the fastest growing professions in the nation. The number of nursing assistants in Massachusetts, in particular, was expected to grow from 42,357 in 2014 to 46,537 in 2024, revised as of September 2016 (Massachusetts Executive Office of Labor and Workforce Development, 2016). According to the Boston Healthcare Careers Consortium (2011), health care employers are also having trouble filling open positions. In fact, health care reported more job vacancies than any other industry in 2010. There is limited evidence on the relationship between job vacancy and skill mismatch in health care. However, regardless of the cause of health care job vacancy, whether it is due to aging population, skill mismatch, or both, what is clear is that the demand for nurses outpaces the supply. And this leaves an important question on how we are preparing students for the workplace, especially those pursuing career pathways to nursing.

In search of educational opportunities and career pathways that give a higher possibility of employment, more and more students and their parents are seeking vocational education. Thirty-two members of the Massachusetts Association of Vocational Administrators responded to two waitlist surveys in 2012 and 2013, and it was found that there were more than 4,600 students on the waiting list for vocational education programs (Ball et al., 2014). This number does not include those who could not apply to vocational programs because of unavailability in their areas of residence. There

were fifty communities, which were not members of regional vocational districts, without access to in-district CVTE programs in the 2015–2016 school year, resulting in more than two thousand additional students with no vocational choices in their district (Massachusetts Budget and Policy Center, 2016; Massachusetts Department of Elementary and Secondary Education, 2016). More than six thousand students in total, including those on the waitlist and those without vocational choices, are demanding additional seats in vocational schools. However, the actual waiting list appears longer than what was reported. The number of students on waiting lists was estimated based on 32 respondents from 66 Chapter 74-approved schools. Also, when the question “How many students are on your school’s waitlist as of December 2013?” was left blank, the researchers assumed that “there were no students on the waitlist” (Ball et al., 2014). Despite their effort to address the need to expand access to vocational programs, the survey data left a possibility of underestimating the actual number of students on the waitlist, which might affect future findings.

Considering the mismatch between supply and demand of workers and increasing demand for vocational education, this study attempts to understand what makes vocational programs so desirable, by exploring students’ educational experiences in vocational education and training programs. It also investigates how their educational experiences are related to the workplace skills requested by employers and the labor market.

Purpose and Significance of the Study

Most prior research studies have discussed workplace skills and the labor market needs *across* industries (Achieve, 2005; Carnevale, 1988; Casner-Lotto, 2006; Massachusetts Business Alliance for Education, 2006; Turner, 2000; University of Phoenix & US Chamber of Commerce, 2011). While some valuable work has been done on labor market skill demand through exploring the inter-industry level, Stasz (1998) claims that “work context matters in the consideration of skills.” She continues that while skills like communications and problem solving are identifiable in all jobs, their specific characteristics and the importance of each skill vary between different occupations, depending on the purpose of the work and tasks required for each occupational title.

Furthermore, existing evidence mostly shows what employers expect from postsecondary school graduates, leaving gaps in research on vocational high school students (Freund, 2013; Turner, 2000; University of Phoenix & US Chamber of Commerce, 2011; Weaver, 2013). A few studies include comprehensive high school graduates, yet they tend to compare high school graduates with college-degree holders and highlight the obvious differences in educational levels, making unreasonable comparisons (Achieve, 2005; Casner-Lotto, 2006; Lynch, 2000). Based on employer-survey results, Casner-Lotto (2006) reported that comprehensive high school graduates do not have a single skill rated as “excellent” by employers and are considered “deficient” in most skill categories.

Meanwhile, vocational technical school students in Massachusetts have consistently shown low dropout rates, compared with the state average: 1.9 percent

versus 3 percent in the 2008–2009 school year, and 1 percent versus 1.8 percent in the 2014–2015 school year (Massachusetts Department of Elementary and Secondary Education, 2016). In addition, it was found that “students in high-quality vocational programs [in comprehensive high schools] are more likely to enroll in college and can boost their annual earnings by about 11 percent, or roughly \$2,500” (Levenson, 2016). Although it may not be fair to compare traditional schools with vocational technical schools because of different admissions process, their noteworthy records in dropout and college enrollment deserve attention and further investigation.

Effective strategies across industries give opportunities for improvement, but that might not be enough to provide needed information for those pursuing education or a career in a specific industry. With an effort to understand the recent high demand for vocational programs and the mechanisms of skill demand in a particular industry, the current study examines the educational experience of those in vocational settings with an intent to pursue health care career pathways. According to the Executive Office of the President, health care is expected to remain “a large source of job growth in the labor market” (2009, p. i). In Massachusetts, health care is one of four sectors that fuel the state economy, along with information technology, biotechnology, and higher education (Massachusetts Business Alliance for Education, 2006). Together with social assistance, health care has been the largest industry since 1995, representing the industry sector that hires the most workers in the state and comprising more than 16 percent of the total number of workers (Blakely & White, 2013). The present study will add to the existing research by examining a particular industry, health care, and filling a void of information

regarding vocational education and training.

Research Question

This study attempts to answer the following question: *What are the ways in which educational experience might be different between a regional vocational technical high school (RVTH) and short-term career training programs?* To respond to the question, interview was primarily utilized, and to a lesser extent, observation and document review were used to support the interview data. Key terms are defined in glossary because such arrangement improves the reading flow.

CHAPTER TWO

Review of the Related Literature

Merriam-Webster defines *achievement* as “a result gained by effort.” Although the “result” has been analyzed with numbers and figures from various angles, it is also true that the “effort” has not been discussed much and has often been largely disregarded these days. What makes students put in effort? Perhaps they want schoolwork that engages them, motivates them to learn, and matters to their real life and future. While focusing on academic achievement, along with No Child Left Behind and standardized tests like the Massachusetts Comprehensive Assessment System (MCAS), vocational technical programs provide real-life skills and help engage students who have been neglected as “second-class citizens” (Halber, 2016). Such a notion that separates vocational education from the rest might be the starting point for understanding and initiating adequate changes.

Academic Approach as the Only Alternative

In our society, there are distinctions between brain work and hand work. Since the industrialization of America in the late nineteenth century, people have a perception that blue-collar workers lack the ability to handle abstract knowledge and complex issues. The cognition and variety of mental activities involved in blue-collar occupations have been largely overlooked. The vocational curriculum was designed under an assumption that anything vocational cannot lead the way to intellect, limiting the intellectual development of those in the vocational track (Rose, 2012). However, physical work also requires a knowledge base—its application to problems, decision making, and reflection

(Rose, 2012). The mentality that highly values the academic over the vocational, coupled with a public perception of “college for all,” has been a barrier to developing high-quality vocational education. According to Lerman (2012, p. 15), over 90 percent of the bottom quarter of high school seniors expect that they will advance to college. The college-for-all mentality disregards paths other than conventional college education, when an academic approach alone no longer motivates students to participate.

One of the most recent large-scale movements with an academic approach is Common Core, a curriculum initiative to increase the rigor of high school courses. The Obama administration and the National Governors Association have pushed states to raise high school graduation standards through the Common Core learning standards. Forty-five states adopted the Common Core State Standards (CCSS) in 2010, and three states developed their own (Achieve, 2011). Implementing college and career readiness curricula (CCR) aligned to the CCSS, Common Core has established a systemized curriculum across states based on the knowledge and skills that students should master in each grade and subject. The increased standards and academic rigor that Common Core brings have contributed to improving the general achievement level. However, with the policy priority on CCR, now educators are required to provide both “universal CCR” to all and personalized career plans to each student, a seemingly impossible goal (Dougherty & Lombardi 2016, p. 328). Common Core is based on an assumption that “raising academic outcomes will translate into improved career outcomes” (Lerman, 2012, p. 16). Considering the skills used in real life, Lerman (2012) counter argues and claims that students may not in fact need high-level skills as required by Common Core:

Less than one in four uses anything more advanced than fractions. Only 19 percent use the skills developed in Algebra I and only 9 percent use the skills for Algebra II . . . the Common Core mathematics standards encourage states to mandate upper level math for high school students on topics that are used by a very small percentage of the workforce. (Lerman, 2012, 17–18)

Murnane and Levy (1996) argue for more modest objectives for all students, such as “the ability to read at least at the ninth-grade level, the ability to do at least ninth-grade level math, and the ability to solve semi-structured problems where hypotheses must be formed and tested” (Murnane & Levy, 1996, p. 17, 29). The recent academic approach created a culture of high expectations which are believed to be “the most reliable driver of high student achievement.” (Lemov, 2015, p. 27) However, it is also true that such high expectations were not promoted enough in the development of nonacademic skills. Soft skills, such as the ability to work in groups and the ability to communicate effectively, are as important as academic skills in preparing students for the future. In fact, non-cognitive skills such as conscientiousness and persistence are critical when students take standardized tests that show the effort students put forward. It was found that these cognitive skills can be “predictive of later educational attainment or labor market outcomes” (Hitt, Trivitt, & Cheng, 2016; Zamarro, Hitt & Mendez, 2016, p. 27). However, this importance is not as visible as it should be in education policies, especially when it comes to the issue of student achievement. The most recent incorporation of CTE, the Every Student Succeeds Act (ESSA) showed its recognition of the importance of non-cognitive skills, communication and collaboration in particular. However, ESSA recommendations were limited in that the purpose of promoting “rich collaboration and communication” was “to improve students’ academic achievement” (ESSA, 2015, p.

215–216). The academic approach alone may not be sufficient to provide students important skill elements truly needed in the workplace.

Skill Requirements and Mismatch

The skills required for the workplace have changed throughout history. International Labour Organization (2011) discussed a few elements that drive changes in education, training, and skills development. First, demographic change, aging population and an increased number of immigrants, requires formal education to be upgraded to retrain older workers and meet the skill needs of immigrants. Second, higher levels of educational attainment leads to faster economic development, thus rapidly changing skills demands. Third, globalization of markets, such as the change from labor-intensive manufacturing to higher value-added manufacturing, changes skill requirements. Fourth, technological change and constant innovation without a doubt drive economic growth and continue to request changes. “Many of the jobs that will be generated over the next two decades do not exist today; yet most of the workforce of those years is already in education and training.” (ILO, 2011, p. 12)

Until the mid-twentieth century, in response to a manufacturing-driven economy, young people were taught to be “fit for useful employment” (Fitzpatrick, 2012, p. 3). The trend starting in the late twentieth century changed the picture and asked for skills training beyond the narrow, job-specific technical orientation (Custer & Claiborne, 1992). Custer and Claiborne conducted two studies focusing on skill demand, one targeting vocational educators (1992) and the other examining employers’ perspectives (1995). In talking with vocational school teachers, employability skills, such as good

work habits, attitudes, and interpersonal skills, were consistently perceived to be the most important skills cluster for students to possess when contrasted with basic and technical skills (Custer & Claiborne, 1992). The findings of the second study were highly consistent with the first; employers stressed the importance of employability skills over basic and technical skills. In another study that conducted a survey with more than three thousand employers in the mid-1990s, employers ranked “soft skills,” such as responsibility, integrity, and self-management, as high as basic skills in terms of their importance in the workplace (Labi, 2012; Spiegel, 2013). Furthermore, the National Center on the Educational Quality of the Workforce (1995) conducted a national survey in which employers were asked to rank factors in hiring decisions. The study consistently showed the importance of soft skills in the workplace by displaying that attitudes and communication skills were more important than educational attainment, credentials, or previous experience. The significance of soft skills continued in the early twenty first century. Casner-Lotto (2006) surveyed over four hundred employers across industries and identified the most important skills for recent graduates entering the labor market, such as work ethic and professionalism, oral and written communication, teamwork and collaboration, and critical thinking and problem solving. In a more recent study, employers placed communication skills, industry-based credentials, and attitude above school grades and test scores (Lerman, 2012). Studies throughout the late twentieth and early twenty-first centuries show the importance of soft skills in the labor market, suggesting meaningful information on what needs to be taught in school.

Despite the general consensus on the significance of soft skills in the labor

market, the specific kinds of soft skills identified and the degree of each skill's importance varied between studies. Turner (2000) examined skills needed in the workplace by surveying college graduates and employers in Georgia. Participants were asked to respond to the previously selected workplace skills that included oral and written communication, computer skills, math skills, critical thinking, decision making, ability to work in teams, problem solving, interpersonal skills and assertiveness. Turner (2000) found that the skill most desired by employers and perceived as being desired by employers according to graduates is oral communication. On the other hand, among high school and two-year college students, Casner-Lotto (2006) found that employers considered professionalism and work ethic most important. For four-year college graduates, Casner-Lotto (2006) agreed with Turner (2000) that oral communication was most important. The University of Phoenix and US Chamber of Commerce (2011) surveyed five hundred employers and employees nationwide and identified the ability and willingness to learn new skills and critical thinking and problem solving as two most important skills when hiring. Despite their importance, the study found it interesting that fewer than two-thirds felt most of their co-workers possessed these skills.

A study by Achieve, Inc. (2005) agreed regarding the lack of preparation, especially among high school graduates. By talking to four hundred high school graduates and four hundred employers and teachers, Achieve's research found that high school graduates are poorly prepared in basic academic skills such as reading comprehension, writing, math and science. The study also suggests that high school graduates are lacking in communication and public speaking skills. Casner-Lotto (2006)

also states that new workforce entrants coming directly from high school are deficient in writing, professionalism and work ethic, and Turner (2000) found significant “deficiencies” in both basic and soft skills among those coming directly from high school. There were some incongruencies between these studies. Professionalism, the skill most desired by employers in the study of Casner-Lotto (2006), was not discussed in the study of Achieve (2005). Oral communication, the skill perceived most important in Turner’s study (2000), was not as critical as professionalism, work ethic and teamwork in the study of Casner-Lotto (2006).

A study done by Stasz (1998) helps understand why such variations exist in the studies on workplace skills. She emphasizes the importance of understanding contexts when discussing workplace skills. By comparing four business areas in Los Angeles, she suggests that soft skills are needed in all occupations, but different jobs require different aspects of each skill, depending on the purpose of the work and the tasks entailed.

Weaver and Osterman (2013) also points out that existing literature uses aggregated high level data, neglecting underlying mechanisms within industries and giving misleading stories about workforce skills. Therefore, the disagreement in existing studies might come from the fact that the studies were conducted at an inter industry level. And this justifies the need for more industry specific information and studies.

Health Care Industry

Although there have been some activities to understand employment trends within the health care industry, there is limited information on health care careers, especially entry-level occupations, and the experience of those on health care pathways. Health care

and social assistance together have made up the largest industry in Massachusetts since 1995 (Blakely, 2013). Yet, the industry also suffers from the job vacancy problem. The health care and social assistance sector is composed of four subsectors: ambulatory care, hospitals, nursing and residential care facilities, and social assistance. In 2011, more than 16 percent of the state workforce was employed in the health care sector; the number of workers was 50 percent more than that of the retail trade, the next largest sector, showing the significant role that health care is playing in the state's economy. Total number of employment in 2015 was 3,396,840 in Massachusetts, and 106,280 of these people had health care support occupations, almost half of whom are nursing assistants (39,990) (Massachusetts Executive Office of Labor and Workforce Development, 2015).

According to Blakely (2013), health care support workers are comprised with certified nursing assistants (CNAs), home health aides, medical assistants, and dental assistants. According to the US Department of Labor, nurse assistants and orderlies are those who "help provide basic care for patients in hospitals and residents of long-term care facilities, such as nursing homes" (2014).

To understand a job vacancy by industry, the Massachusetts Executive Office of Labor and Workforce Development conducted a survey of fifteen thousand private employers in 2013. The job vacancy rate was calculated by dividing the total number of job vacancies by the total number employed in the industry. Health care and social assistance had a job vacancy of 4.4 percent (22,638) in 2013 (Massachusetts Executive Office of Labor and Workforce Development, 2013). The Boston Healthcare Careers Consortium (2011) reported that nursing aides, orderlies, and attendants had a vacancy

rate of 9 percent (604) during the fourth quarter of 2009.

The Boston Healthcare Careers Consortium (2011) found that health care employers in Massachusetts are having trouble filling some jobs while health care students are also struggling to identify career opportunities that they are already qualified for. The organization claims that there is a gap between jobs and available workforce. The organization attempts to identify the areas of misalignment between training programs and employer needs with intent to collaborate to make a better alignment. Focusing on community colleges, the Boston Healthcare Careers Consortium gives three recommendations: clear information on training system, information sharing among stakeholders, and alignment among curriculum offerings. Given the lack of intra-industry studies, the organization had a strong contribution to the health care industry.

In an attempt to identify how relevant the information is to the health care industry, the researcher paid attention to the types of employers participated in existing literature and how many of these respondents had health care backgrounds. Turner (2000) surveyed twenty-four employers in Georgia, and only one respondent had a health services background. Casner-Lotto (2006) conducted a survey with four hundred twenty-five employers nationwide and forty-three of these respondents were involved in the health care industry (12.2% of the total participants). A study done in 1995 by Custer and Claiborne recruited the samples from two groups, health occupations employers and trade and industrial employers in examining employers' perspectives on workplace skills. The study was meaningful in that one hundred one out of one hundred seventy-four participants were from health occupations. However, the purpose of the study was to

identify the most important skill cluster among basic, technical, and employability skill clusters, reflecting the trend of vocational education in the late twentieth century that moved from the development of technical skills to that of employability skills. On the other hand, Stasz (1998) conducted a study that suggests workplace skills distinct in health care and emphasized the importance of examining the intra-industry level. Four business areas in Los Angeles country, transportation, traffic management, microprocessor manufacturing, and health care, were included in her study. She attempted to identify skills needed in the workplace by interviewing and observing daily activities of frontline workers, such as home health aides and licensed vocational nurses in health care. With its consideration of work context, her study reported that home health providers utilized oral and written communication skills that “convey an appropriate fact accurately” on the status of patients and that precisely log their own activities (p. 216). She also states that the characteristics of teamwork are different in health care and require home health providers to work as “members of a large managed-care team,” which is characterized by “distributed knowledge and authority” (p. 212). The study of Stasz (1998) concluded that “work context matters in the consideration of skills” (p. 218). With its meaningful findings, it is clear that more studies like the Stasz’s are needed that are industry specific and that provide applicable information. In addition, future studies would be more valuable when tightly connected to vocational education and as they are more recent.

Secondary Vocational Education

Many existing studies asking employers about skill demands lack connections to vocational programs through which the labor market needs might be accommodated, especially for entry-level work. Studies that connect tend to pay more attention to postsecondary school graduates (Freund, 2011; Turner, 2000; University of Phoenix & US Chamber of Commerce, 2011). There are a few studies examining employers' perspectives on secondary-school graduates in general; the focus is not on specialized vocational schools (Achieve, 2005; Massachusetts Business Alliance for Education, 2006; Stasz, 1999; Lynch, 2000).

For most of its hundred-year history of formalized governmental support, vocational education in the United States trained students for unskilled and semiskilled positions that required simple, repetitive tasks. Despite the provisions that allowed students to learn in both general and vocational education settings, vocational schools were considered a place for "behaviorally challenged students" (Dougherty & Lombardi, 2016; Fitzpatrick, 2012). Negative connotations associated with vocational education contributed to a lack of general interest in vocational schools (McCourt, 2005). The atmosphere began changing in the late twentieth century as the economy moved from manufacturing-based to knowledge/information-based. Vocational education shifted to career technical education (CTE) in the early 1990s, connecting secondary education and career with more relevance to the future of high school students. Since then, there has been some effort to educate all students to be ready for both college and career, regardless of their intention to go to college. The CTE curriculum in fact has better

course sequences and is designed to help students develop both academic and technical skills and smoothly transition to postsecondary education or a career. With such high relevance, CTE is considered a viable solution for reducing dropout rates and increasing student engagement in education (Kershner, 2008).

CTE is also known as vocational technical education (VTE) in Massachusetts, and the programs approved by Massachusetts General Law Chapter 74 are officially called Chapter 74–approved VTE programs by the Massachusetts Department of Elementary and Secondary Education. CTE programs follow both the Massachusetts Vocational Technical Education Frameworks and the Massachusetts Curriculum Frameworks, which incorporate the Common Core state standards. With regulations requiring schools to teach various competencies, from academic knowledge and occupational-specific skills to work attitudes and general employability skills, CTE graduates are considered more job-ready than regular high school graduates (Massachusetts Business Alliance for Education, 2006). Massachusetts Budget and Policy Studies (2016) lists benefits of high-quality career vocational technical education (CVTE) programs for young students: greater engagement in school, higher rates of college enrollment, increased career skills, and increased earning.

It is promising that the state of Massachusetts requires VTE schools to include “competency-based applied learning that contributes to students’ academic knowledge, work attitudes, general employability skills and the occupational-specific skills” (Fraser, 2008, p. 2). And the Massachusetts Vocational Technical Education Framework reflects such requirements (Massachusetts Department of Elementary and Secondary Education,

2014, 3). As a result, VTE schools in Massachusetts have shown hints of excellence in various aspects. Compared to the state average, VTE dropout rates are significantly lower: 1 percent versus 1.8 percent in the 2015–2016 school year (Massachusetts Department of Elementary and Secondary Education, 2016). In particular, regional vocational technical high schools (RVTH) have provided students with an opportunity and choice to have both high-quality academic and occupational proficiency (Fraser, 2008). Students who were admitted to and attended an RVTH school are also more likely to graduate on time compared to similar students who just missed being admitted (Dougherty, 2016). The average graduation rate at RVTH schools is significantly higher than the state average: 90.5 percent versus 80.9 percent (Fraser, 2008, 6). (More information on RVTH can be found in the description of study populations in chapter 3.)

Recognizing the potential of vocational education, more and more parents and students are seeking quality vocational programs in the commonwealth. In 2005, forty-two thousand students enrolled in vocational programs in Massachusetts that increased to forty-eight thousand in 2016 (Massachusetts Department of Elementary and Secondary Education, 2016). Although mostly located in the remote northwest corner of the state, there are still fifty more communities without high school vocational programs.

Excluding these communities, more than three thousand students were on a waiting list in 2015 (Levenson, 2016). If these communities offered CVTE programs, the Massachusetts Budget and Policy Center estimates 2,200 more students would be enrolled in them. The organization suggests that existing school buildings could be utilized to reduce capital costs. Although it is unclear how many of the schools in the fifty communities without

CVTE are under-enrolled, moving excess demand to under-enrolled schools is also considered a viable solution for high demand. However, one should be cautious about utilizing existing resources. While meeting the high demand is important, simply utilizing the old industrial arts curriculum or adding career programs that would fit the existing facilities are unlikely to lead students to successful career pathways. Although attempts to reduce costs should continue, utilizing existing facilities should be done carefully by making sure that old buildings are capable of providing focused programs that guarantee large blocks of time required to master the career skills demanded in the current labor market (Fitzpatrick, 2017).

In response to the unmet demands for secondary vocational programs and the lack of intra-industry level research, this study attempts to understand the elements that make vocational programs highly wanted, especially those providing career pathways for one of the biggest industries in the state: health care. Considering the importance of approaching the issue from what matters to the students, this study aims to examine students' perspectives, their educational experiences in vocational education and career-training. Chapter 2 discussed relevant literature to the skills gap problem, the health care industry, and vocational education. Chapter 3 details the methodology of the current study, including research question, design, data sources, data collection, and analysis.

CHAPTER THREE

Methodology

Research Question

Considering what is already known about demands in health care and vocational education in high school, this study examines the educational experiences of (1) seniors in RVTH health services, (2) students in RVTH practical nursing (post-secondary), and (3) those who graduated from short-term career-training programs (less than eight weeks) in Massachusetts (the second and third group participants are adults). The primary research question is: What are the ways in which educational experience might be different between RVTH and short-term career-training programs? Evidenced by its high MCAS pass rates (all students reached “advanced” or “proficient” in English language arts in 2016), and despite their selective admissions, the educational experience at RVTH schools is considered unusual; this study attempts to identify why. Furthermore, recognizing the significance of school culture in students’ educational experiences, the study seeks to respond to how RVTH culture influences character development in students. By exploring these questions through students’ lenses, the researcher hopes to identify the elements that are directly related to the outcomes needed in the health care field. The comparison between three participant groups ultimately manifests similar or different educational experiences. Considering the differences in the participant age, gender, and educational background, the researcher does not intend to show one being better than the other.

Research Design and Data Sources

The nature of the research question that focuses on lived experience calls for a qualitative approach. This study is a geographically constrained case study that collected narrative data as the main source through semi-structured interview questions. To explore participants' views and perspectives, in-depth, one-on-one interviews were conducted with students in one particular RVTH (high school seniors and postsecondary program seniors) and CNAs who obtained their training from short-term career-training programs at a community college and a nonprofit organization. Other qualitative data collected and analyzed include program descriptions, syllabi, lesson plans, and class materials.

Additional observation and interview data were gathered from the RVTH health services instructors, supplementing the main student interview data in chapter 5, in the discussion of the skill elements needed in the health care industry, the findings in relation to the literature review. The RVTH senior survey data generated summary information on students' graduation plans, whether they were employed, were accepted to college, or joined the military. These additional data sources supplemented the primary interview data and triangulated the data to enable more nuanced inferences. Taken all together, the data sources for this research provided a detailed account of educational experiences of those from an RVTH school and short-term career training programs.

Advantages and Disadvantages of the Selected Design

The use of a qualitative approach enabled the researcher to report in a rich, descriptive way that helps an understanding of the vocational education contexts and of individual students' educational experiences. Patton (2002) states that qualitative

interviewing helps “learn their terminology” and “capture the complexities of their individual perceptions and experiences” (p. 348). Despite these advantages, the study was primarily conducted in a particular high school setting. This indicates that the findings of this research were predominantly based on the experiences of those who shared similar interests and were navigating toward a common goal in a particular industry. Consequently, the goal of the current research was to identify the elements of educational experiences that participating students believed particularly significant to them: the education that matters to the students.

Description of Study Populations

The participants of this study were composed of three groups: seniors in RVTH health services who recently obtained their CNA license, seniors in the RVTH practical nursing program, and CNAs who received CNA training from short-term career-training programs in Massachusetts.

The Regional Vocational Technical High School

There were twenty-six RVTH schools in Massachusetts in 2016, and twenty-four of these schools offered health services (Massachusetts Department of Elementary and Secondary Education, 2016). Eleven of the RVTH schools placed more than 85 percent of their graduates in postsecondary schools, work, or the military eight to twelve months after high school graduation, and four of them placed more than 90 percent (Massachusetts Department of Elementary and Secondary Education, 2014). In this particular RVTH school, the researcher found an enviable placement rate of 95 percent in 2014 and outstanding records in MCAS pass rates, which were the primary reasons for

the study site choice. RVTH students had shown constant improvement in MCAS scores for twelve straight years; by 2016, 100 percent had reached “advanced” or “proficient” in English language arts, and 94 percent in mathematics. The state averages were 92 percent and 80 percent, respectively. In science and technology and engineering, 91 percent of RVTH students reached “advanced” or “proficient,” compared to the state average of 71 percent.

The high school investigated in this study is an outperforming public school that provided academic, technical, and vocational training to 1,199 students from thirteen towns during the 2015–2016 school year. The school offers eighteen CVTE programs that are categorized into service, technology, and construction. Service pathways include automotive collision repairs and refinishing, business technology, cosmetology, culinary arts, automotive technology, health services, and dental assisting. Technology pathways involve engineering technology, drafting and engineering technology, manufacturing and engineering technology, electronics and engineering technology, information technology, and multimedia communications. Students interested in construction pathways get to choose one of the following: construction technology, electrical, plumbing, heating, ventilation, air conditioning and refrigeration, and painting and design technologies. Freshmen at RVTH have the opportunity to explore seven shops every other week until late November. While making decisions for three shops that would suit them best, students are presented with the factors to consider, such as working conditions, industry trends, and students’ own aptitudes, interests, and values. In addition to students’ preferences and initial admission scores, shop instructors evaluate students based on a

common rubric scoring guide. Such guides help instructors look at students' competency in five areas: technical area, following instructions, quality of work, safety, and behavior.

Keeping a culture of high expectations, RVTH provides rigorous programs that integrate academics, vocational, and technical skills. The school incorporates the STEM approach, combining knowledge and humanities with math and science skills. Students apply theory learned in academic classes to solving workplace problems encountered in shops. By exploring career options early on, students start planning their future ahead of others who might get the opportunity much later and be exposed to only an academic pathway. The school reflects the changing definition of "employable" and focuses on nurturing students' communication, critical thinking, adaptability, and collaboration skills. Character is a vital part of the RVTH education, emphasizing qualities such as self-esteem, accountability, leadership, and creativity. The culture of RVTH schools encourages students and teachers to greet each other with smiles in hallways and to respect diversity that might exist among students from thirteen different towns. The school promotes a healthy and supportive educational environment for all students.

The school offers various academic courses and student services that prepare students for personal and professional success. In the career enrichment course, students learn twenty-first-century skills, such as autonomy and accountability, through project-based collaborative work. Students also develop portfolios that feature their academic and technical accomplishments. Although having a portfolio is a requirement for graduation, it is also considered useful for students' future employment. The school promotes individual career planning and sets a student's vision throughout high school by

encouraging communications with school counselors. The school reached its milestone in the cooperative education program in the 2013–2014 school year. One hundred seventy-one seniors and juniors with good academic standing worked off-campus every other week, while earning career vocational technical credits and building workplace skills. Students are often offered full-time employment after the co-op, leaving a positive influence on their future career as well as their postsecondary education experience.

The school focuses on improving its teaching and learning styles. In order to accommodate the changing workforce needs, new techniques and technology, the school partners with local businesses and colleges, and together they identify recent industry movements that need to be reflected in the programs. In the 2014–2015 school year, the school established an engineering technology department, reflecting the industry needs, student interests, and future employment opportunity.

Today, RVTH receives more than eight hundred applications each year; the current facilities allow three hundred students to enroll in each grade. In a process of selecting the most qualified applicants, the admissions committee utilizes the following criteria: scholastic achievement (maximum thirty points), attendance (maximum fifteen points), school discipline/conduct (maximum fifteen points), local guidance counselor's recommendation (maximum fifteen points), and interview (maximum twenty-five points) (interview is an optional requirement according to the state manual) (Denise, 2015, 7–8; Massachusetts Department of Elementary and Secondary Education, 2010, 5–8). The admissions committee decides on a cutoff point every year by ranking all applicants and determines the number necessary to fill the freshman class. It should be noted that the

above school information was collected between May 2014 and March 2017, and the information accuracy is limited to that time frame. For instance, the school filed a request to the Massachusetts Department of Elementary and Secondary Education in 2017 to reduce the weight of academic transcripts, thereby increasing the values of the other criteria. This finding was not reflected in the admissions policies of 2015.

The Regional Vocational Technical High School Health Services

Considering the importance of the health care industry in the state, the researcher focused on the health services department of RVTH, which concentrates on the development of nursing skills. Students learn anatomy and physiology, growth and development, medical terminology, aging, infectious disease, mental health, and nutrition. Students have clinical training in long-term care, acute care, and rehabilitation facilities. Most RVTH students obtain certifications in CPR, automatic defibrillators, first aid, paid feeder, Alzheimer's and dementia sensitivity training, CNA, home health aide, and introduction to EKGs. With these certifications, students graduate ready to be a home health aide, a nursing assistant, or dietary aide, or to enter practical nursing programs. According to the 2014 senior survey data that provided a list of postsecondary institutions that students plan to attend, eighteen students planned to attend four-year nursing schools, one planned to attend a two-year college in nursing, and one planned to practice nursing in the military. According to the Massachusetts Department of Elementary and Secondary Education data, all sixteen respondents said that they were advancing to four-year college, and nine of them planned to work at the same time (Massachusetts Department of Elementary and Secondary Education, 2014). Those who advance to a four-year

college have career pathways to be a physical therapist, registered nurse, social worker, occupational therapist, speech pathologist, or dietician.

The Regional Vocational Technical High School Practical Nursing program

RVTH opened a postsecondary practical nursing program in September 2009 and graduated nineteen of its first students in January of 2011. As most students work full-time, the program operates three times per week from 3:50 p.m. to 10:10 p.m., with one weekend clinical experience per month, for sixty weeks. The RVTH practical nursing (PN) program provides 1,090 hours of instruction. (The Massachusetts Board of Registration in Nursing requires 945 hours of courses, including 540 hours being in clinical practice). The PN program focuses on caring for the older adults. Students learn skills in patient-centered holistic care, professionalism and ethics, leadership and teamwork, informatics and technology for nursing practice, evidence-based practice (EBP), quality improvement, nursing competencies, nursing theory, pharmacology, therapeutic treatments, and modalities. The program is accredited, and students graduate eligible to take the National Council Licensing Examination for Practical Nurses (NCLEX-PN). Graduates who pass the test have entry-level licensed practical nursing (LPN) career pathways in long-term care, ambulance care, acute care, and rehabilitation settings, or they advance to a bachelor of science in nursing program. (The school provides bridge programs with Fitchburg State University and Worcester State University.)

Description on short-term career-training programs is included in the next section because the programs were not preselected like RVTH. After recruitment was done, the

researcher went back to see the program details that participants obtained training from. Therefore, the researcher found it more appropriate to include such information in data-collection procedures to show the recruitment process and how it evolved.

Data-Collection Procedures and Case Selection

Since the researcher was interested in the educational experiences of RVTH students in health care pathways (a particular population in a particular industry), she deliberately recruited the following populations: RVTH seniors, RVTH postsecondary PN program seniors, and CNAs who obtained their training from short-term career training-programs as a comparison. RVTH seniors were chosen for this study because they had had enough time to experience both academic and clinical portions of the program. Seniors had also reached the important milestone of obtaining a CNA license. PN seniors were selected for the same reason: they had had enough time to experience both academic and clinical parts of the program and were ready to take the NCLEX-PN exam. Due to the characteristics of short-term career training programs that lasted less than eight weeks, the recruitment was not limited to those about to finish their program.

As a result, the participant selection for this study was purposive, not random (Miles & Huberman, 1994). Creswell (2003) asserts that purposeful sampling occurs when a research site and/or people are chosen with the intention to understand a fact, situation, or one's perception. Patton (2002) states that purposeful sampling "offers useful manifestations of the phenomenon of interest" (p. 40). It is believed that the participants invited purposefully would provide the needed information on educational experience and help answer the inquiries of this study. Since the study examined the

insights of particular populations, the findings were not intended to be generalized.

The researcher started data collection by contacting health services instructors. The researcher conducted interviews with the instructors in August and October 2015, and observed a classroom in September 2015. The interview data from the high school instructors were included as the secondary data source of the study in order to keep the findings more compatible and consistent in terms of what the study intends to find out. Instructor interview data were utilized as additional information on the skills demanded in the health care industry and included in the discussion section.

**The Regional Vocational Technical High School Health Services instructors
— 2015 background study**

At the time of the interviews and observation in 2015, there were four instructors in health services, and each was in charge of a grade level. Two instructors were interviewed in August 2015, and the other two were interviewed in October 2015. In the first interview visit, all instructors presented their syllabi for the 2015–2016 academic year. Before interview, the instructors received a copy of the consent form and had enough time to ask questions about the study. They gave a verbal consent.

Classroom observation was conducted in September 2015. The researcher visited a sophomore shop class, and the instructor offered a copy of the lesson plans, which outlined objectives (skills list) for students. The researcher took notes during the observation, paying attention to the terms repeatedly used by the instructor because they were relevant to the important workplace skills identified in the literature review. After reviewing the syllabi and lesson plans and observing the classroom teaching, the

researcher asked a few questions to the instructor, and the instructor promptly shared an example scaffolding note and grading rubric (“blue skill sheets”). Although the researcher did not observe the senior classroom, the instructor in charge of seniors shared her PowerPoint presentation used in classroom teaching and a copy of the detailed course scope and sequences in October 2015.

The researcher contacted the high school instructors in August 2016 for student interviews, and the instructor in charge of seniors replied with a list of students who had volunteered to participate. The researcher emailed the instructor a parental information sheet a week before the interviews. The interviews were conducted in September 2016, on an “after-school day,” when students were doing their assignments and having Q&A time with the instructors. The instructor spared a room equipped with a bed and mannequin that would be used for shop practice under normal conditions. It was believed that such a familiar environment would provide comfort to the students during the interviews. Before each interview began, the researcher confirmed that students had presented the information sheet to their parents. Students had enough time to read an assent form and ask questions, and they gave verbal consent before the interview.

The researcher met with the PN coordinator to introduce herself and the study and to discuss the possibility of arranging interviews with the seniors. Due to the fact that the evening classes lasted until 10:10 p.m., the visits happened before the PN class started, at 3:50 p.m. Such an arrangement often challenged the students because they needed to leave their work early to meet with the researcher. Students also needed to take exams on both days of the researcher’s visit. These factors resulted in some delays and rushes

during the interviews. Three of the PN seniors were interviewed in October 2016, and one was interviewed in December 2016. Each participating senior read an information sheet and had enough time to ask questions before and after the interview.

The researcher initially targeted community colleges that provide nursing assistant programs (which typically eight weeks or less to complete) and chose five colleges by listing them by distance. The researcher identified college staff who have access to CNAs ready for the workplace or looking for jobs, and contacted a career coach, an employer liaison, the director of career services, the assistant program manager of an adult community learning center, the career placement coordinator, the dean of students, a career counselor, and staff members in the following programs and school organizations: mentor program, student life, career center, student activities, cooperative education and internship, and student support and advising center. A total of thirteen people across five community colleges were contacted and asked to post a recruitment flyer on their bulletin boards and to share the information with potential participants. A career placement coordinator in a community college in northeastern Massachusetts was willing to help and post the flyer on bulletin boards. The researcher was also directed to the career center website of a community college located adjacent to downtown Boston. The recruitment posting was listed with regular job postings for about a month. Despite some email exchanges with the community colleges' staff, the researcher did not receive any response from their students.

The researcher expanded the recruitment scope from community colleges to short-term career-training programs that cover both community colleges and independent

organizations providing CNA training. In order to increase response rates, the researcher utilized social media, LinkedIn and Facebook. Search keywords used for LinkedIn's advanced search were "certified nursing assistant in Massachusetts" and a particular name of the five community colleges. The number of people that matched the search keywords was forty-three. The researcher InMailed (LinkedIn messaging system) thirty-three people because ten people blocked InMails from people not connected. Since Facebook does not have an advanced-search function, the researcher searched for "certified nursing assistants in Massachusetts," without a particular college name. The search results listed people's postings relevant to the search keywords that ranged from organization articles to personal postings. The researcher identified personal postings by CNAs who mention that they just passed the CNA exam and were officially certified in Massachusetts. Twenty-nine people who posted such messages in 2015 and 2016 were invited for the research. Among the people contacted, seven people replied with further questions, and one person who graduated from a community college in western Massachusetts agreed to participate in the study. The interview was conducted in December 2016 in western Massachusetts. The researcher recruited three more participants through word-of-mouth (convenience sampling), who obtained their training from a nonprofit organization or a regular high school. All three participants were interviewed in December 2016. The case of the regular high school graduate was later excluded for two reasons: it turned out that the training she received was a three-year program, conflicting the characteristics of study populations in short-term career-training programs, and the researcher failed to produce rich, descriptive data because the person

did not want to be recorded. The interview was taken by note instead. Unlike other recruitment methods, word-of-mouth often missed details in communication, resulting in misunderstanding on interview procedures.

Short-term career-training programs

As variations exist within the K–12 sphere, there are also variations in postsecondary career-training models. In addition to the RVTH PN program, programs at a community college and a nonprofit organization are included in this study as variations outside of K–12. The community college in western Massachusetts provides a nursing assistant program and a joint training program for nursing assistants and home health aides. The nursing assistant program takes place for four weeks, Monday through Thursday, from 9:00 a.m. to 2:30 p.m. (approximately eighty-eight hours of training). The study participant who obtained training from this community college took the second option that involved training for both nursing assistant and home health aide, for five weeks, from Monday to Friday, typically between 9:00 a.m. and 2:30 p.m. (approximately 115.5 hours of training).

As an official organization testing CNA candidates for skill competency, the nonprofit organization provides small daytime courses that emphasize both academics and hands-on-skills training. Although the information available online does not include evening classes, it was found that classes typically take four to eight weeks to complete. Students learn CPR, first aid, automated defibrillator usage, infection control, and how to take vital signs. Based on their students' exam pass rates, the organization asserts that they provide one of the best programs in the country.

Each interview was approximately thirty minutes long and recorded upon agreement. The researcher was cautious about close-ended questions and tried to avoid such questions if possible, because close-ended questions anticipate and manipulate answers (Patton, 2002). The researcher prepared filter questions; if a respondent replied in the affirmative to “Did you . . . ?” or “Was there . . . ?” questions, the researcher had follow-up questions. Semi-structured questions were used as guidance; question wordings and orders were prepared in advance, but often changed to ensure that interviews evolved as naturally as possible. Such preparation guided the researcher to focused interviews attentive to both time constraints and the possibility of diversion. The below table summarizes and displays the timeline of the data collection:

YEAR	MONTH	DATA COLLECTED
2015	August	Interview with two health services instructors Syllabi
	September	Classroom observation
	October	Interview with two health services instructors Lesson plans and class materials
2016	September	Interview with five health services students
	October	Interview with three practical nursing students
	December	Interview with one community college graduate Interview with one practical nursing student Interview with three nonprofit organization graduates

Table 1 Summary Display of the Data Collection Timeline.

Interview Questions

The semi-structured interviews were conducted with five high school seniors based on three themes of questions: high school experience (vocational education), comparison to comprehensive high schools, and future plans. The first theme was divided into two for adult participants, in an attempt to understand their perceptions on high school educational experiences that may not be necessarily vocational-oriented. In place of comparison to comprehensive high schools, adult participants were asked to compare themselves with young classmates who had just graduated from high school, in terms of maturity, experience, and need for extra academics training. Questions regarding high school experience were not asked to some adult participants who graduated from high school more than twenty years ago and did not seem to remember much about their high school life. In short, there were four themes of the questions for adult participants: high school experience, career training experience, comparison to younger students, and future plans. Although the researcher conducted interviews with a list of questions, each interview was not identical and their individual educational journeys were distinct. Changes were made appropriate to each case. Detailed questions typically asked are included in appendix.

Data Analysis

Interviews of all selected cases were recorded and transcribed. In order to convert recorded conversations to exactly what was spoken by participants, the researcher used professional transcribing services from Rev.com and verified the accuracy by listening to and comparing with the original recordings.

The analysis of the transcribed interview data followed the six-stage process of Creswell (2003). First, information in transcripts was segmented for easy reading and referencing. Second, the data were read holistically and disaggregated by overall patterns that characterized the educational experiences in nursing programs. Third, the transcripts were coded based on the identified patterns. Fourth, codes continued to be refined until no new ideas seemed to be emerging. Fifth, the researcher wrote rich descriptions of the refined codes and findings (chapter 4). Sixth, the data were interpreted while comparing findings across the cases (chapter 5). In an attempt to increase the coding quality, *The Coding Manual for Qualitative Researchers*, by Johnny Saldaña (2009), provided definitions and examples. According to Saldaña (2009), a code is a word or short phrase that apprehend summative characteristics of data, and a theme is a phrase or a sentence that represent a unit of data. Saldaña (2009) also states that “a theme is an outcome of coding” (p. 13). The researcher created codes as they emerged by reading the data, and final themes were made by grouping the emergent codes. The final themes were presented as subtitles of each case findings in chapter 4. Detailed codes or categories were organized in a table format to increase the accuracy of data analysis. Program descriptions, syllabi, lesson plans, class materials, observation notes, and instructor interview transcripts were read to supplement the student interview data and to test for consistency, increasing general confidence in the study findings. Any incongruencies revealed by using multiple data sources were also noted, providing a greater understanding of the data (Patton, 2002).

Findings are presented in chapter 4. Quotations were used to manifest the

interviewees' perceptions in their own words. Chapter 5 consolidates findings from each case and displays the following items: (1) What was discussed most in across cases (frequency)? (2) What was not discussed? (3) Were there any unique answers? and (4) Were there any differences between three participant groups? The researcher attempted to determine if there were any patterns particular to a group and if there were any patterns that remained persistent from one group to the other. For instance, RVTH students may talk about a group culture that lasted for three years, which may not be mentioned by those in short-term career-training programs that lasted eight weeks or less. By displaying the answers to above questions, the researcher ultimately responds to the primary research question: What are the ways in which educational experience might be different between RVTH and short-term career-training programs? Findings are also discussed in relation to the reviewed literature, identifying the elements of educational experience that are directly related to the outcomes needed in the health care industry.

The expected end products of this study are twofold: one is showing significant educational elements that the RVTH students identified, and the other is the implications for practice and suggestions for future research that would guide vocational education and career training programs into a better alignment with labor market skill demand.

Table 2 summarizes the methodology used in this study:

PHASE	APPROACH	OUTCOME
Study population	Purposeful	Health services seniors Practical nursing program seniors Short-term career training program graduates
Qualitative data collection	Individual in-depth interviews with seventeen participants	Text data (interview transcripts, memos, program descriptions, syllabi, lesson plans, and class materials)
	Documents	
	Observation	
Case selection	Purposeful	Interviews ($n = 17$) Cases selected ($n = 12$)
Qualitative data analysis	Coding	Codes and themes
	Identifying frequency	Pattern compilation
	Identifying uniqueness	
	Identifying persistence and differences between groups	
Interpretation	In-group comparison	Summary
	Between-group comparison	Discussion
	Comparison with literature	Implication Future research

Table 2 Study Methodology.

Quality and Ethical Assurances

For the quality purpose, multiple sources of data were used, such as interviews, observation, memos, program descriptions, lesson plans, syllabi, and class materials. The variety of the data instruments provided data triangulation with an intent of revealing

consistent results, increasing the validity in the findings (Patton, 2002). Reliability is another quality that the researcher attempted to ensure for other researchers who might have similar inquiries and want to follow the same procedures. To help subsequent researchers arrive at the same conclusions, the researcher detailed the descriptions of study populations and data collection procedures, including the supplementing data and the recruitment method that failed. It is the hope that detailed explanations will prevent other researchers from making the same mistakes and help produce better quality data and studies.

To address research integrity and ethical issues, the researcher obtained permission for the study from the Boston University Charles River Campus Institutional Review Board. Permission for interviews with the RVTH instructors and observation was obtained in February 2015 as an exempt study. The study was approved on an expedited status in August 2016 because of the inclusion of minors as a study population. The researcher developed three informed consent forms, one for high school students, one for their parents, and one for adult participants. These forms are included in appendix.

For confidentiality purpose, the researcher assigned a study ID to each participant after recruitment and kept the key to the code in a password-protected Excel file in a password-protected computer. Any identification of participants in field memos, consent forms, and information sheets was codified. For the record, after participants read the consent form or information sheet, the researcher wrote the interview date and the ID number and signed on the back side of the documents. Before interview started, participants were assured that they could withdraw at any time for any reason and if they

decided not to participate, their information would be kept confidential. All the documents were stored in the researcher's home bookshelves, and electronic documents in the researcher's password-protected computer. Documents with study IDs will be destroyed after the study completion.

Statement of Positionality

The researcher had an internship at the office of Massachusetts senator Sonia Chang-Diaz in 2012. As a chairperson for the Joint Committee on Education, the senator worked on numerous education bills, and the researcher had the opportunity to investigate dropout intervention and prevention programs. Vocational education stood out as a way of increasing engagement through high relevance to students' real lives and careers. The researcher became interested in options such as RVTH that had shown high graduation rates and good academic records and was curious to know what makes these RVTH students stay in school. After conducting a literature review and proposing a study to the committee, the researcher focused on students' educational experiences at RVTH as well as what might differ between RVTH students and those in comprehensive high schools and those who chose traditional pathways of career training. Because of the personal interest and belief, the researcher might have focused on elements that positively impacted students' educational experiences. The researcher attempted to remain neutral by collecting data from various sources and including any suggestions from students. Although not directly discussed in the data analysis, it is believed that the personal question of what makes RVTH students stay in school is deeply related to and can be informed by students' educational experiences.

Significance

Students' educational experiences are strongly connected to their future career. If an effective vocational education and training system is to be developed for their future, more information is needed on the current status. There is a growing body of studies on the labor market demand, but very little information on how they differ by industry. Nor do we have much information on regional vocational technical high schools despite their success stories. It is also significant that the study provides a level of detail that cannot be accomplished with large-scale quantitative analysis by focusing on individual student experiences. Given the research gaps discussed, the possibility of informing about experience in health care pathways and vocational education is of general interest and significance. Specifically, it is the intention of the researcher to inform about the elements that can be replicated in similar settings. The researcher does not intend to advocate for an RVTH model to be adopted as a universal model.

CHAPTER FOUR

Findings

Regional Vocational Technical High School—Certified Nursing Assistant Students (Health Services Students)

Case Study 1: Ariana

School Choice

At the time of this interview, Ariana was a senior who “really loved going to the technical school.” Her parents supported her to come to the technical school, but she remembered that she chose to attend and was proud to say, “It was ultimately my choice.” Ariana shared her experience at the tech school in comparison to the educational experiences of her friends back in her hometown:

I have friends [...] that go to the regular high school and you can tell that they don't enjoy it much. Obviously they're in academics every week so they get bored easily. Here I'm able to just have hands-on learning and I can switch from academics to my vocational trade so it's a lot more interesting and more fun for me, I think.

From her freshman year, Ariana was able to look around various shops and experience different trades. Thus, she had opportunities to find out which one fit her best. She said, “Getting placed in Health Services was most significant [in high school...]” and “a big step” in her life because it was the place where she knew she could “strive and [...] be happy.”

School Culture

Ariana admitted she was bullied a lot at her old school. During the interview, she explained a different school environment she experienced at the technical school: “Here, everyone’s just so warm and welcoming so I felt that was really different. I’ve never really felt welcome somewhere before and here I just feel like we’re all just one big happy family.” Although there were some rules and policies she needed to obey, Ariana considered them helpful: “You pay attention more and you learn more from everything. I feel like there is a purpose to having those.”

Skill Building

Hard skills

During her junior year, Ariana focused on the skills she would be using in clinical training. One important skill she learned and practiced a lot was giving bed-baths, which she described as a part of “a.m. care.” She “absolutely [felt] very confident” about the skills she practiced and credited her teachers for that: “Our teachers, the main goal is making sure we’re comfortable so if we were ever struggling, they’d make sure to point us in the right direction so we can always improve.”

Soft skills

When asked about what she learned in high school, Ariana listed various soft skills: “Since I’m in Health Services, I’ve learned how to hold responsibility, how I’m able to care for others [... and] what it means to [...] mature and [...] be an adult.” In addition, Ariana learned how to manage her time in shop. By managing her time efficiently, Ariana was able to have “everything done in order,” counting it one of the

greatest skills she had learned. Being in shop also gave Ariana the opportunity to build her “communication skills,” which helped her break through obstacles: “We’ve learned how to overcome barriers in shop because [we] can face a lot of things that could cause trouble for us, and just overcoming them [... makes] our residents [...] comfortable.”

Career Development

In the discussion of her job readiness, Ariana accepted that her school experience helped prepare her for the workplace:

Over the summer I got a job as a nursing assistant in one of the nursing homes we’ve been to on clinical so I feel like everything I’ve learned in shop, like building my communication skills and confidence, [...] really helped me get the job I actually have now.

For her academics, at the time of the study, she was taking a few AP courses and felt that they showed her what an actual college course would be like and what to expect: “I feel like the teachers are trying to show us exactly how it’s going to go.” Ariana wanted to stay in nursing in the future and go to a four-year college to get a bachelor’s degree in nursing. She recognized that some of the basic nursing skills she learned in high school might overlap but thought it would be advantageous: “My cousin was in drafting here and he went to school for that and he said the first year or so it was all just everything he learned in shop so I feel like he had the advantage.”

When asked if there was anything that she wished for the school, Ariana emphasized her satisfaction with the school; however, she felt the educational opportunities she was able to explore should be given to more students:

I’ve just been so happy here and I feel like there’s nothing really we could change. I just feel like I’ve had the best opportunity and I wish more students could come

here because we have such a small acceptance. If I had to change something I just wish it was bigger so more people could come and experience everything we have to offer.

Case Study 2: Sophie

When Sophie first started at the school, she remembered that she was a “super quiet” person. Sophie often had trouble communicating with people, but being in a technical school helped her to “branch out and be able to talk to people,” especially after joining Health Services. Although she had often been in high stress situations, where she had to take care of actual residents, Sophie understood it as a part of the learning process and kept trying to challenge herself. Being around people who had the same values helped Sophie “enjoy high school” and grow up as an individual.

School Choice

When it was announced at her middle school about applying to the technical school, Sophie was not sure at first; the option was not familiar to her and her friends. All her friends were going to a regular public school, but Sophie found the technical school interesting and wanted to see the different programs the technical school provided. Thus, she took the initiative to talk to her parents. Her father supported her, but she remembered that it was her choice to come to the technical school: “My dad was obsessed with the whole technical area. He had heard on I think NPR news about the technical school system so he was really nudging me to apply and try it out, so I did.” Comparing her experience with that of her friends who went to a regular high school, she said, “There’s a big maturity part” at the technical school because students get to have career experiences early on:

Their experience has been more academic-based and I don't think they've had those opportunities to see different jobs that they would eventually do in the future. I think it's been hard for a lot of them to see their futures and to help them find out what majors they want, but at [the technical school] you can definitely choose a shop that you want and center your future on that path so it really helps be more confident in what you're going to do in the next five years and the next ten years. I've definitely seen that... I think because of the characteristics instilled in you [at the technical school], it's really helped me to be more confident [...]. Living high school life but we actually have to be a lot more responsible because we have academics and shop here.

School Culture

Sophie recounted that teachers always made it evident that if students needed extra help, they could stay after school. Teachers were always there to help students.

Watching teachers, counselors, and other school staff, students learned how to keep loving and being passionate toward their own jobs:

They don't look like they're annoyed. They always seem like they love their jobs. It's always the worst thing to look at a teacher and they just hate their students ... but all the teachers that I have had they can honestly say that they love their students and they love teaching.

As a teenager, Sophie found it surprising to have policies prohibiting cell phones and requiring uniforms in the department, but she accepted them as a way of building professionalism and responsibility:

At first, it's like, "Oh my gosh! I have to put away my phone. I can't use my phone. I have to wear this uniform. I can't be myself by wearing the clothes that I want." It definitely teaches you that responsibility because these are real life skills that you need to learn when you go into the workplace because you can't just wear a really skimpy outfit when you go to work. You have to have those roles and need to learn them early [...]. Also, scrubs are comfortable too [...] I think we all understood why we had to wear them.

Skill Building

Hard skills

Sophie summarized the technical skills she learned in shop:

We learn how to move patients. We learn how to transfer them to wheel chairs, infection control [...]. We learn how to do our CPR, and pulse, and different temperature. Last year actually I had my CNA test, so we actually get certified on these things and all of our work that we did for the past three years turned out to be our CNA test.

Although the written test was easy for Sophie, she found the physical part of the CNA test demanding and nerve-breaking: “The lady stands there and she doesn’t say anything. She marks you down. It was really stressful but I was confident [about] my skills that I was taught.” Sophie thought students spent equal amounts of time on learning and practicing each of the skills. She remembered that being assured that she could stay after school to practice was a big help:

If we were not feeling confident then we’d either watch a video or the teachers would show us a refresher, or we’d practice again in the lab. [... We] always had the right amount of time and enough time to get the skills down.

Soft skills

Starting from her first year of high school, Sophie focused on building communication skills. As she visited different shops every other week, Sophie remembered going to an adult daycare in Health Services where she met with residents and had the opportunity to learn how to communicate with people she had never met. Like many others, Sophie felt strong ties to her shop and believed all her significant experiences and accomplishments in high school were in shop. One recent experience helped her build communication skills as well as emotional intelligence:

One of my residents actually passed away so [...] it was difficult. You had to deal with that death and know when to stop that emotional barrier from happening. I think dealing with that death and understanding human processes [...] meeting new people and being able to communicate with them [...] have probably been the biggest event in my life.

Career Development

Sophie enjoyed diverse career-related opportunities provided by the technical school: “They always have seminars and [...] a specific class called Career Enrichment that helps you prepare from freshman year for college.” Students also had their own career action plans. Although the occupations she wrote down always changed, she said, “They definitely help you a lot.” Sophie learned what to avoid and “things to look out for” and especially enjoyed special classes after school that helped her understand the financial aid she would need in college: “I’ve definitely been thankful for those opportunities.”

Sophie initially wanted to be a nurse. After years of consideration, along with numerous workshops, however, Sophie came up with an answer somewhat vague but very inspirational: “I enjoyed more the people part of things instead of learning, like, Biology [...]. I really like helping people [...]. After helping people that can’t help themselves, it’s really instilled in me that I want to make people’s lives better.”

When asked about something she wished the school had, she replied,

Honestly I can’t [think of anything]. I think the only thing is sports [...]. They only allow juniors and seniors to be on the varsity [...] but that’s literally the only thing I can think of because I was a soccer player, but when it comes to just the school portion I can’t think of anything.

Case Study 3: Heather

For Heather, being on clinical was her most significant high school experience. It helped her gain a special connection with people she had never met, and more important, gave her the opportunity to make a real impact on someone's life:

It actually happened yesterday, and I think it was really rewarding. We were out on a clinical, and this lady who was a Harvard graduate and ninety-three, she was super sweet and some of the nurses were telling us, "Be careful, she's really tough. She might yell." I was ready for that, but she was really sweet. I got her to play piano for the first time in thirty years, which was really heartwarming because I also play piano. To have that connection and to have her play and be really happy, because she hasn't gotten out of bed in like two weeks, but have her play, everyone was like, "Oh gosh, she's getting out of her room. That's kind of crazy." And then when I was leaving, she was like, "God bless you, sweetheart. You're amazing." I've had some of those experiences before, but that one, I don't know why, but it was just really special and you could tell that you made an impact.

School Choice

Heather made her own choice to come to the technical school: "I thought it fit me better, and I was done with my sending town, I was ready to get out of [t]here. I met a lot of new people [here]." However, Heather recollected some students' parents pushed them to come to the technical school, believing that it was a "much better" choice for their children than going to a regular high school. Some of her hometown friends saw what Heather did in the technical school and questioned themselves: "What am I going to do for college? I don't really have a plan." Heather felt the difference and thought students at the technical school "have a head start, definitely." Thinking about her daily life, Heather remembered her friends often complained about the homework they were given:

One week you're in shop, one week you're in academics, so you don't have a lot of homework during shop week, [... but] they just have constant [homework ...].

When I go to shop, I think of it as you're here all day and you're not running around from class to class trying to figure out if you have a test next period, it's just kind of relaxing. I like it a little better, and they can tell because any time they talk about it, I'm like, "Ugh, not for me."

School Culture

Heather found "respect" in the school's rules and systems:

A lot of them are simple; you would hear in general [...] a lot of my teachers that respect is what they want. If you're using your phone and they ask you to put it away, just put it away and don't talk back. I think that's probably one of the main things.

Heather noted that the uniform rules at Health Services could get strict, with closed-toed shoes and white socks, for instance, but Heather found them helpful and particular to the department: "If we don't [comply], we get points taken off our daily evaluation, but it teaches you to be professional [...] and continue to progress [...]."

Heather especially liked the atmosphere of the school: "Everyone's very friendly [...] and everyone accepts everyone [...]." Growing up together from kindergarten through high school in small towns could produce some "cliques" among the students at some other high schools. However, Heather and her friends, who came from thirteen different towns, sat together in shop and became extremely close throughout their high school life. Heather noted that the "friendly" atmosphere did not exclude administrators, and she actually learned from them:

You see people in the hallway, and everyone is super friendly [...]. They wait outside the school and wave to us when we get off the bus and say good morning, [...] and they pretty much know everyone's name which is kind of surprising [...]. Me and my friends are always wondering how they remember. It's nice because it's not like they're just an administrator trying to run the school, they care about the students and they put forth the effort to learn your name which is kind of

important. Everyone treats each other like an adult. Respectfulness and having open arms to everyone even if you aren't necessarily fond of them is probably one of the biggest things. It's just important, and it's one of the biggest things I got from coming here [...].

When asked about significant experiences in high school, Heather credited a Career Enrichment teacher she had had for two years for teaching her to be respectful:

If you treat me like an adult, I'll treat you like an adult even though you're a teenager. If you don't like someone, just be respectful to them, you don't have to talk to them but respect them in any way.

Whenever she had ideas, Heather talked to the teacher. In sophomore year, she had a business project that required her to create her own company. Heather recollected that the teacher recognized her as one of the leaders in the group, and she took it as a reward that her effort was seen by someone.

I still go to him if I need advice about school or sports or college, because he kind of knows like, "I know how you work, why don't you try this, or why don't you try that?" It gives me an insight [...] he understands where I'm coming from. Not like some of the other teachers who don't want to connect with you on that personal level, so he understands and he's not afraid to keep learning or me bothering him every day like, "Hey, I have a question about this or that."

Moreover, Heather learned about having ownership of the school, which involved keeping it clean. She was taught to pick up trash if she saw any in the hallway and to clean the floor if there were any spills:

They tell us that the school is the students' school, not the teachers' or any of the administration's school, you're the one learning in it so make it your own. It's not our classroom, it's yours, so if you want to make it dirty, make it dirty, but it's yours not mine.

Skill Building

Hard skills

Although she was uncertain about what she wanted to study in college, Heather recognized that having her nurse assistant license was “a big step.” If she decided to go into the workforce, Heather was already a licensed CNA: “Even if it was just Health Informatics, it would still look good that I have my license.”

Soft skills

Like others, Heather recalled that building communication skills started even before she decided on which shop to go for the next three years. During the freshman exploratory, Heather went to adult day health centers to do communications projects with people with developmental disabilities: “In exploratory, even if you don’t want the shop, you still get something out of it.” While she was in a situation students would not normally have been in, Heather learned different ways of communicating with people who were blind or deaf or had developmental disabilities.

Heather took two AP classes last year and three this year. Handling heavy coursework loads taught her how to manage her time efficiently:

It’s tough. It’s not like you have all of this homework due the next day, you have a deadline to meet [...] and make sure that your time is planned out evenly. I still haven’t perfected it yet, but I’m getting there.

Heather also recognized she learned from teachers’ different teaching styles. Although some teachers trusted students to get their work done, some were “watching like a hawk,” and she needed to have things done. During tests, some teachers spread students’ desks apart, while some left them together. Some might have surprise quizzes

here and there, whereas some may not: “It’s not like a set schedule.” Heather believed she learned a lot from the changing schedules by adjusting herself to the changes that varied day to day.

Career Development

Heather initially wanted to stay in the medical field as a nurse practitioner or a nurse. At the time of the interview, she said she had even been “debating” going to college right after high school because she was only seventeen and young. Heather wanted to work and travel and understand herself better before going to college and spending money on something that she might not necessarily use in the future: “I just don’t know what I want to do. It’s very confusing; [... however], I like doing what I do here, it’s fun.” Although Heather was applying to colleges as an early action, she still had no idea what she was going to do. Emphasizing that the idea of traveling was important to her, Heather applied to schools in Florida and Maryland. She was also open to options such as going to Portugal, seeing different things, and knowing more about her own cultural background. Heather sometimes met people who asked her how she would finance her plan coming right out of high school. Currently, she was trying to set up a co-op job as a CNA and hoping to work throughout her high school career. Instead of spending money on college right away, Heather hoped to invest in something that she was certain she wanted to do: “I don’t know enough yet to go to a set school and decide what I want to study.”

When asked about her wish for the school, Heather recounted when she first got accepted to the technical school. Heather was unsure which shop to enter, and the

decision that she had to make at such young age challenged her so much that she made a choice without knowing what she really wanted to be:

I was lucky enough to be one of the three hundred that got into the school [...] It was kind of a let's just see where it takes me, if I don't like it, I'll go back. I had doubts during freshman and sophomore year [...].

Heather considered going back to her town because she did not feel she fit with Health Services. Although Heather found that "it makes sense" that the school had career aspects and aimed to help students be ready for college and career, she questioned, "What if you don't want to do that [trade]?" Despite the exploratory year, Heather did not feel a strong vocation toward any shop, and various workshops and seminars designed to help students build skills in the chosen industry often pressured her and gave her more doubts:

It's great ninety percent of the time, then there's that ten percent where it's overwhelming [...] I think that's what happened with those doubts of me wanting to go back because they keep pushing it on us, and I'm like, "No thanks."

Although Heather was not in favor of the workshops that presented too much career-focused material, she wished that the school had more workshops that were not career-oriented or school assemblies to help everyone get to know each other better:

There's still some people in my grade that I see and [don't know the name...] because I've never had the chance to go up and talk to them [...]. So I'd probably say an integration of getting to know your classmates a little better. I went to a friends' birthday party, and one of the girls is in my grade and she didn't know who I was [...] who knows, you could make a lot more friends.

Heather had close friends from her hometown but wanted to expand her friendship group further. She believed the Competition Center, the giant gym of the technical school, could integrate students, because it was much easier to bring everyone together when things were fun. Although being in shop with those who shared similar interests helped her be

part of a family with her teachers and friends, she also accepted that it had its own drawback:

A lot of people from health are friends with people from dental. A lot of people from HVAC are friends with people from plumbing [...] It's just the way it goes [...] I'd want to meet more people if there was some way to do that, because [...] in my hometown] I knew every single person. I could tell their phone number, their address, just because I was with them for eight years.

Case Study 4: Julia

Julia was a senior who had just obtained her license and started working as a CNA in a long-term care facility. She said, "It's been really fun," and noted she had enjoyed high school so far. She remembered her first clinical day vividly:

You're getting [residents] ready for the day [...]. You are washing them and [...] have to be observing that they are okay and that they don't have any marks on their skin. I was terrified that I was going to do something wrong and make a silly mistake, and my teachers were really convincing us, we're going to do fine. That first day I had a resident who I really connected with like even after that first day I'd go and have dinner with her sometimes. That day was when I realized that this is what I want to do. I want to care for people and it really turned my career choice around [...].

Julia had wanted to work in pediatrics until she had her first clinical day. At the time of this study, she thought she might want to work with adults and older adults: "That was a turning point and [...] changed my mind [...] and that's what led me to get my job as a CNA."

School Choice

Julia had wanted to come to the technical school since she was in the sixth grade, influenced by her brother who went to the technical school and fell in love with its auto-

tech program. Julia followed in her brother's footsteps and was now enjoying the Health Services program. Julia often talked to her hometown friends about her school and heard them say, "Wow, I wish I could have gone there." Even though Julia took advantage of school options and chose to come to the technical school, she saw her friends "regret" because they saw that Julia was "getting the career readiness skills and [...] employability skills." She noted that students in traditional high schools "do not get taught [...] whether] they want to be a nurse:"

They think they want to be a nurse but they don't know what it entails until they get into college and they've committed to the program, so a lot of them accept that they wished that they went here and gone into a trade and decided what they wanted to do because now they're kind of stuck and they don't know what to do as seniors. They don't know where they want to go in life. I feel like I'm more prepared for the real world and more prepared to go out and work [...].

Julia remembered that her friends in her hometown were "kind of forced to go to that school," while she made her choice to come to the technical school. Julia believed that everyone at the technical school had a "great sense of pride" because they had made their own choices.

School Culture

Julia especially liked "the sense of community" at her school: "In our shops, if you ask any shop, you can talk about the shop family. We all can go to each other and we all have each other's backs and [...] everybody loves being here." Julia noted, although traditional high schools reflected the idea that "it's your town so you have to go," everybody made the choice to attend the technical school; in fact, students loved saying that they came through this particular school. Julia was pleased to say, "Everybody that

you talk to says it's a great school." The family culture continued and taught the students to embrace the idea of helping each other: "Even the younger grades, the seniors will help the freshmen get to class and [...] I really like that we all kind of help each other out like a big family." During junior year, students were paired with freshmen. Younger students stayed for the week and juniors taught them basic skills like hand-washing. Both sides had the opportunity to get to know each other, and Julia valued that they became friends in real life: "The freshmen will come up to us and ask us a question and we get to tell them where to go and stuff like that."

When asked about the strict uniform policies of her department, Julia noted, "It's really taught us a lot." Julia believed that the rules actually simulated the real world and reflected what she would experience in the workplace in the future:

The uniform, at my job we have pretty much the same thing. You wear scrubs and I feel like coming to school knowing I have to be in a uniform has reinforced that in the workforce, so I know I have to go and my scrubs have to be neat and clean and I know that I should be wearing scrubs and nice socks, nursing shoes, have my hair up.

In addition, in her first job, Julia was not allowed to have her cell phone near her; it always had to be locked away:

Especially in this day and age, you're kind of attached to your phone. It taught me that I can detach and that I need to put it away and be professional in the work setting [...] and not so much like teenager in the workforce, how to be an adult.

Skill Building

Hard skills

Julia shared that she learned a lot of "real life skills" during the career enrichment class:

It taught us employability and stuff and we've learned a lot of things that we need to know in the real world, like how to pay for a house. We've had lessons on how to balance checkbooks which you don't learn a lot in other schools.

Even her academic teachers helped her learn real life skills: "Even our Math teachers [...] taught us how to buy a house and how mortgages work, so I'm really ready to go into the real world." Besides learning how to care for people properly and safety procedures in shop, Julia emphasized that she had received a lot of training on "everything" needed to be a CNA:

We go out on clinical and we are either with partners or alone and we're expected to get that person up and ready for the day. We've been reinforced and trained for the first two years that we were here, we were out in the lab doing it every day and we had teachers out there giving us constructive criticism and telling us easier ways to do things. We've really been enforced on how to do these skills and give really effective care.

Soft skills

Because students have one week of academics and one week of shop, Julia often got her academic homework done during the shop weeks, building time management skills: "I've learned how to budget my time, and I keep focus on both areas of practice and keep my grades up in both of those. I've learned how to balance my time and also scheduling a lot better." She also learned "not to procrastinate and [...] make deadlines."

In addition, when Julia started high school, she was able to talk to people her age but not people who were older, especially elderly people. It was hard for her to make connections with them at first. Since Julia started doing clinical and talking to people more frequently, she gained a better understanding of how to reach out and speak with them, which led her to take better care of residents:

I've learned communication in a huge way and I've learned how to really effectively care for people, and like the job that I have right now, there's a lot to do but I've also learned how to do that job and give the most effective care that I can and really be compassionate towards those people. I've basically learned a lot of stuff that I can use in the real world.

Julia recollected that she took everything to heart during her freshman and sophomore years. She had "a thicker skin" now, so when people said things to her, Julia tried not to overanalyze and understand that "people have bad days." Julia wished she had known to develop a thicker skin earlier, but she now had better interpersonal skills that she built along with other real life communication skills, and she could laugh at things that might have disturbed the Julia of the past: "Maybe someone yelled at you, it wasn't really them, it was their day happening."

Career Development

Julia was positive that she would first go to school to be a registered nurse (RN). She planned to work in a hospital setting for a couple years and then go back to school to get a nurse practitioner license and specialize in families. Julia considered this her end goal, becoming a primary care person for families: "We've been enforced a lot on we need to know what we want to do. We should be prepared early and we should get ready early and not be struggling at the last minute to get by." Julia found herself ready for the workplace after having shop experiences and actually working as a CNA:

I can just jump in [...]. The CNAs that trained me said that normally people don't really know how to do the skills and they have to walk them through it and I can just go in someone's room and get them up and dressed for the morning.

As for college, Julia shared that various workshops and guidance counselors who came to shop every cycle had been really helpful in helping her write her college applications: “They answer all of our questions immediately. We have appointments with them and [...] they’ll really communicate with us to get us ready for the college [...]. They’ve prepared us really well.”

Julia felt that students had everything they needed at the technical school. Because Julia was interested in family medicine, she wanted to see more early childhood education in Health Services, if there was any demand: “Health Services are very focused on elderly care so maybe people wanted to go into early childhood [...] I know a lot of my friends back at home wanted to do that.” Julia also admitted that some might be interested in vet tech: “I know some girls in here want to be vet techs but their aim here is so that they can know basic anatomy in a way, so maybe like more focus interest shops, not so broad.”

Case Study 5: Maria

The technical school, without a doubt, was “the place to go” for Maria—three of her family members had graduated from the school: “My dad was in the first class that they had for drafting. Then my mom was in business, and my sister was in multimedia communications.” Because her sister, who was a junior when Maria was a freshman, was in Student Council, Maria received lots of help and support from the beginning. In addition, sitting at lunch during academic weeks with her many friends from the same town helped her make a smooth adjustment to a new school.

School Choice

Because both her parents and her sister graduated from the school, Maria recalled that “she definitely wanted to come” to the technical school. Although Maria believed that her family would have accepted her decision had she wanted to go to her sending town high school, she definitely wanted to enroll at the technical school. Maria emphasized that her experience had surely been different from the experience of going to a regular academic high school. She credited her shop experience, during which she was able to learn her own trade: “It’s just crazy to think that I’m already a CNA. I’ve definitely had a great experience. All the teachers that I’ve had in shop have helped so much. They are really wonderful. They definitely prepare us for the workforce.” Already a CNA, Maria is out in the real world applying “advanced skills” that she would probably not have obtained by just being in regular academic classes. Of note, Maria was already “so accustomed to” being in shop and successfully switching the weeks, a fact she found “bizarre”:

In academics we’re learning everything that just plain high schools are learning, but we have to learn it in half the time [...]. The teacher have to really be able to teach us in a timely manner but still get the points across and give us the information that we need to pass the tests and be able to be successful academically in half the time [...]. People always say, “Oh, you go to a tech school; you’re not as smart as us or whatever.” I’m like, “Really, because I have to learn everything that you learn in half the time and I get a trade and you’re just sitting in a classroom the whole time.” If you really want to weigh that out again, I think I’m a little bit higher than you.

Maria compared herself with her friends in her hometown who “don’t get to learn the trade” and noted that her option was a “step up” in her preparation for the future:

Let's say I didn't get into college or whatever; I could then work before I go to college because I'm already a CNA. I already have some sort of certification that will give me a decent job, or if I wanted to take a year off I would be able to rely on something other than just working at a Kohl's or a Target or whatever. I would have something steady.

School Culture

Maria remembered the hard work she had done to get into the school:

Everybody's just so nice to each other because they [...] had to apply and do interviews and everything. We had to try our best to get in here, so everybody wants to be here. [...] overall atmospheres; everybody loves it.

Maria enjoyed making friends with people who came from thirteen different towns. She liked hearing about their past school experiences and what they liked to do:

If you just go to your sending town, you [may] have friends from different towns from extracurricular activities or whatever. [...] Here] you make new friends obviously in your academic classes, then once you get placed into a shop, you have your shop family [...] It's like a second family.

Maria considered getting accepted into Health Services her most significant high school experience because she knew it was what she wanted from the beginning. Her experience so far proved it was the right choice:

I wanted to be a speech pathologist since I was eight years old. That's obviously always been in my head [...]. Our shop is so competitive. We accepted twenty-six students my year, and then there were still fifty more that put down Health Services as their first choice and didn't get it. It's definitely very competitive, so I feel blessed to be into this shop and then have such caring teachers that walk us through everything. They care so much about us. We're basically their children. That has just opened my eyes. Then the connection that we've made with them is just incredible.

When she first went out on clinical, Maria said the experience was "nerve wracking," but teachers were always there to hold her hand and help her walk through the

steps: “They didn’t just kick us out the door, like, ‘Go ahead. Go take care of residents.’ They were definitely there. Sometimes I feel like they’re there still too much, but that’s their job. That’s what they’re supposed to do.” Both shop and academic teachers showed passion toward their jobs, and Maria recognized that she was learning in a caring environment: “All the teachers, they’re extremely nice. You walk by them in the hall, ‘Hi, how are you doing?’ They’re always smiling. They love their job. They love to be here.”

In addition to the group culture that she experienced in the classroom, Maria felt a warm atmosphere in Student Council. At her sending town, students were elected by their peers to join the Student Council. Maria remembered that it was more like a “popularity contest.” On the other hand, Maria joined the Student Council at the technical school through an easy but transparent way: “You sign up, you answer a few questions. You get a signature from your parents, and then you’re able to join the Student Council. That’s just another huge family atmosphere.” Students at the Council planned events such as pep rallies and homecoming, and everyone enjoyed the process and had fun with it. Students often volunteered and attended state conferences together. Through these activities, Maria learned “leadership skills,” and she believed her experience at the Council was “very helpful.”

When talking about the cleanliness of the school, Maria credited an atmosphere in which everybody wanted to be present and the fact that everybody loved the school:

You walk by; you see a piece of trash on the floor. You pick it up because you want our school to be representable. You want people to walk in and be like, “Wow. Everybody loves this school and it’s incredible,” and so we try and maintain that status.

Maria loved and highly valued her school: “Just the whole atmosphere of everything is incredible.”

Maria found the school and department policies useful and “important” because they provided “guidelines” that she would have when she was in the workforce:

In our shop, obviously scrubs are important because you need the professionalism, the cleanness and everything. You wouldn’t wear street clothes out to take care of someone. The safety thing, we have to wear non-slip shoes. If people were taking care of residents in flip-flops, that’s not practical and that’s not sanitary. I wish we didn’t have to wear the white ones, but it is what it is. I do think that they’re effective. The big thing at our school is teaching us professionalism to go out into the workforce, so setting these guidelines that you’re going to have when you go out and get a job is a good thing to already be exposed to.

As for cellphone use, the policies varied by teacher. When Maria had to text her parents about a ride home or need some Internet help for homework, teachers allowed her to use her phone quickly if she asked for permission:

If you’re doing a research project in shop and the computers are wicked slow, because sometimes they are bad at the school, it just takes forever. You ask, “Oh, can I look up this question online?” They’ll let you do that for educational purposes.

Skill Building

Soft skills

Maria pinpointed professionalism as the skill that tied together everything she had learned. Because the healthcare field was so broad, Maria had to be able to deal with various things and different types of people with different needs. But Maria believed that the skills she learned prepared her to be responsive in a polite and professional way: “Possibly angry family members or angry residents or just people that are uncomfortable

may give you a response that you're not used to, but you still have to be able to respond to them in a professional manner." Maria credited her shop experience for her skill building: "I feel like everything ties back to our shop because they teach us so much here."

Communication skills were another important competence she practiced, especially in shop. During freshman and sophomore years, students visited adult daycare facilities to help with arts and crafts projects and talk to the elderly. By creating bonds with the residents, Maria was able to build her communication skills. As Maria was paired with other classmates to take care of residents, she learned how to work with others and build teamwork skills. Maria tied it to professionalism:

Whether you like them or not, you need to put that aside and be professional and be able to complete the task, which is essentially taking care of the residents, because that's what we're there for. They can't do it, so we have to do it for them and provide the best care possible.

Career Development

Maria's career goal was becoming a speech pathologist at a private practice. Since she was eight years old, Maria had never wavered from that goal:

My mom's cousin, when he was younger, he got in a really bad car accident. As a result from that he had a speech impediment. Just to see the miraculous improvements that he's made from just going to his speech pathologist, they told him he would never be able to walk again. He might not be able to talk. Now you can carry on full conversations with him. He still does have some physical disabilities, but he lives on his own. It's just incredible to see. If you have somebody that you don't know why they have a speech impediment, just being able to [...] figure it out and what you can do to help them and the different techniques and things just to make improvements with them I think is really interesting.

Maria thought the technical school had prepared her for college and the workplace,

especially with Career Enrichment:

We make resumes in there, cover letter; we have our own portfolios that we had to make for shop with skills in them and awards that you've received and all that. They've given us the tools. We've done mock interviews.

Students were required to dress professionally on interview days to experience an actual interview and see what it felt like to seek a job. Maria considered interviews the most important part of the job application where "you are going to nail [it, the job]." She believed that understanding what she wrote down on her resume and answering questions about it really showed her professionalism. With the Career Enrichment and co-op experiences, as well as with going out on clinical and taking care of residents, Maria was confident that the school prepared her well to understand "what the real world is like and what actually being a CNA would be." Maria also noted that she had an idea of what would happen once she started nursing school:

Everybody's freaking out on their first day of clinical, but you've had your first day of clinical four years ago. You can jump in and [...] just help other people too that the nerves are getting to them. You can be like, "I'll jump in, help you; I understand, I went through it already."

When asked about something she wished the school had, Maria shared,

There's never anything that I've gone to look for and I haven't been able to [find]. We have so many clubs [...] eighteen different shops [...] a wide variety of that for what you want, different levels of classes, different electives. I've never found really a problem.

Maria credited her shop teachers for preparing her for everything and telling her what would come up, so she was never "left blind." During meetings with principals and administrators, Maria recalled, "They're very honest about everything and giving us information, so I honestly never felt like I needed something more."

Maria often faced some negative connotations about technical schools. She commented, “That’s what tech schools used to be.” They used to be the places where students learned something and did not have to go to college but “that’s 100 percent not the way it is [now].” Maria accepted and respected that people have their different points of view. However, technical schools now “give baseline for college,” so students did not go there blind. Maria knew what would happen in college and was confident that she could be helpful to other students who might not know what to do and struggle.

Short-Term Career-Training Programs—Certified Nursing Assistants

Case Study 6: John

At the time of the study, John worked as a certified nursing assistant (CNA) at a nursing home and was also a volunteer firefighter. He had graduated from high school the year before and begun taking classes at a community college in western Massachusetts. In spring 2017, John enrolled in the CNA program—a combined course with home health aide training—and took classes four or five nights per week for a month and a half; each class was approximately four hours long. The program provided more than a hundred hours of training, more than the state requirement of seventy-five classroom hours. John described the additional hours of training as assurance that “we stuff the butter on the bread a little more.”

Program Choice

Decision factors

From the tenth through twelfth grades, John worked at a nursing home in the kitchen, but he wanted to move up the workforce ladder and get a better paying job. He

was ready to change the kind of work he was doing and desired hands-on experience where he could learn something new every day. John was intrigued by nursing and believed that studying to be a CNA would open new doors for him. John was lucky enough to be sponsored by his employer, who paid for his tuition and, in exchange, asked for a year's work under contract. In addition to this sponsorship and the job security, John found the distance to the community college very appealing.

Skill Building

Hard skills

During the one-and-a-half-month training, John had both classroom and clinical experiences. In class, he practiced putting on gloves, hand washing, and adjusting dummies or fellow students. Students also read textbooks and watched videos to understand some particular concepts, such as making healthy meal plans for diabetic residents. John said that the program included many hands-on learning opportunities and, once they were out on clinical, the chance to apply what they had learned in class. John did not volunteer information about soft skills acquired.

Age factor

John did not have any trouble with the mathematics and English he was required to do as a CNA student. From working in a fire station, he was familiar with measuring pulse and respiration rates, which required simple math skills such as counting to sixty seconds or looking at the clock. John recounted that he learned how to take someone's pulse from his mother, who was also a nurse, when he was ten years old. John became comfortable with the skills by being with his mother, being in the fire department, and

practicing in the CNA class. John considered them comparatively easy skills and believed anyone could do the pulse and respirations if they could count thirty seconds twice. He did not have difficulty with the English grammar but said that a couple of his non-American classmates needed some extra help.

John recalled one person who had just graduated from high school, but everyone else was aged between nineteen and fifty. John regarded himself as more mature and experienced than the younger classmate. Although only a year older, John did not think that he himself would have been ready to be a CNA just out of high school—it's a job that requires careful attention to detail, getting up early in the morning, and managing everything else in one's daily life. John shared what he heard from his coworkers, nurses, and CNAs before making a decision to be a CNA: "You'd be a good nurse. Your attitude, your compassion with the residents, how you talk to them, how you work with them. Even though you're in food services, even when you come up just to get the dishes to bring downstairs to wash, you're great with them." With such encouragement, John decided to become a CNA, and his experience had been pleasing: "I'm glad I did it now [rather] than [right] after high school, because I probably would [...] not [be] so mentally or maturely prepared to do this. Now I'm nineteen instead of eighteen, there's a little more maturity there."

Program Culture

John noted that the instructors always asked if there was anything that students did not feel comfortable with and gave extra time to train after class. Especially when the training was close to clinical, some students were nervous about meeting real patients and

needed extra help, and instructors were very assuring: “They were always aware of giving us a good surrounding of training. [...] They didn’t ever do too little or too much on something, but they made sure that if you weren’t confident on something that you would get confident, and you’d get enough training to do that skill.”

The program at the community college did not require students to wear nursing scrubs, so to begin with John wore street clothes like the other students; later, he became inspired by one classmate who wore scrubs and decided to try them himself: “When I go to the actual jobs that I’m working at, and I’m not used to this uniform, [...] I want to precondition myself [to] wearing scrubs to know what it’s like.” When asked about his significant experience at the program, John said he was happy that, compared to the nursing field at large, there were a number of male students in the class.

High School Experience

High school choice

John transferred many times during his high school years. He went to a charter school for seventh grade, a regular local high school for grades eight through eleven, and a public school in Alaska for his senior year. John went to these schools because they were the local choices, but students did have school choice: “There is school choice around here. You might live in Shelburne Falls, but you can have school choice and go to Greenfield even though you could go to Mohawk, which is in Shelburne. There’s a lot of schools, school choice, and all that.” Despite many transfers, John enjoyed such changes and recounted that he was consistent in academic achievement.

High school skill building

John listed three soft skills he learned in high school: time management, organization, and communication. He also learned how to have his homework done on time—“an obvious but overlooked one”—and keeping tests and quizzes organized was helpful for the final exams: “I kept all my quizzes and tests, and so I can go back and see it—let’s say on the final, question one is the same as question two on the other tests and stuff, then I was able to just basically free-zone everything.” In addition, having good communication with teachers helped him keep track of his assignments and grades.

High school culture

“I always did sports, so that was one culture I was in.” John had been involved in sports since sixth grade; he did cross-country for five years and indoor and outdoor track for four years. When he moved to Alaska, John played basketball because they did not have indoor track. John considered sports the most significant experience in high school because it relieved his stress when he had a tough day at school, whether educationally or personally. John always did his homework, which was a requirement from his coaches: “If you have a class where you’re getting a B minus or a C plus, you’re going to have to bring that up because if you have less than a C minus, [...] you can’t be on the team, or you can’t play in the next event or game, sport, competition.” John emphasized he had to be better than the average students and have good grades to be on the team and participate. Although partying was part of high school culture he witnessed from other students, John recollected that homework was his priority: “I’m not the teacher’s pet. I’m doing my work, and if a teacher likes me, you guys are sometimes misbehaving.

Sometimes I'll misbehave but not as much as you guys do.”

John described varying restrictions on cell phone use in all three schools. In western Massachusetts, he could have a cell phone at lunch but not in class; in Alaska, there was zero tolerance from some teachers, but some students used it under the desk, which he believed was “bound to happen” everywhere. John personally tried to keep his phone away: “If I’m going to be on my phone, why should I even go to school? If I’m at school, I’m going to learn.”

Career Development

Although he planned to keep his CNA license up to date, John did not think that his current job would sustain him permanently. He considered CNA a starting job and wanted to continue for a year or maximum of two. He had not yet decided between firefighting and nursing: “Nursing, [...] you can get taking home thirty, twenty-five dollars an hour in a higher-paying job. [...] Firefighting, I know they make less annually than a nurse, but I’m already in the firefighting aspect on a volunteer department.” If did pursue nursing, he would like to be a medical technician or a licensed practical nurse: “They told us in our CNA course that if you want to become a nurse, you can go to the left, you can be a med tech, or you can come to the right and take an LPN. Just about the same course, same time, same credits. Just different perspectives.” At the time of the interview, John was uncertain about what he would do in the next five years but believed he would know more in the three years.

In general, John believed that the program prepared him for the workplace. After going back to work, John was given ten days on the floor to train, but he realized after

day eight that he already had every skill he needed: “It was adequate training. They made sure you knew what you were doing. [...] It was good training with good coworkers.”

Case Study 7: Dana

Dana received CNA training and certification from a nonprofit organization, the provider of the CNA exam and training. Dana separated the two-month training into two phases: skills learning and clinical experience at a nursing home. She stressed the significance of the exam she had to take after the program completion: “Even though you finish your training, it doesn’t mean anything unless you pass [the exam].”

Program Choice

Decision factors

Dana chose a branch close to a train station for easy commute. She also wanted an organization that was experienced in CNA training. Dana called the program “efficient,” and there was someone to help whenever she had trouble with a particular skill. The program also turned out to be less expensive than similar programs at other organizations.

Skills Building

Hard skills

The first skills Dana learned in the program were how to take vital signs and bed-bathing. Dana also learned how to turn a patient, how to help him or her walk with a cane or crutch, how to transfer a patient from wheelchair to bed or bed to wheelchair, how to weigh a patient, and how to perform CPR on a patient. Dana regarded what she learned as basic skills that would help nurses do their job.

Soft skills

Dana also gained some soft skills from the training that seemed particular to the industry: “We definitely learned how to transfer information from a person or how to give a report to your nurse. [...] We basically learned how to communicate in healthcare.”

Although Dana did not recall any significant experience from her CNA training, she shared an experience she had as a CNA that might be relevant to others in clinical training settings:

I started working in the emergency department. I was lucky enough to find a job, and one of my workdays we had a patient who had a code, meaning in a coma. The patient didn't survive; the patient passed away. [...] I lost my father, so it reminded me of those days, how the family felt. I actually really understand what they go through. [...] I couldn't stay too long in the room. I had to step out and have fresh air. I wanted to cry because it reminded me of those days. Basically, I had PTSD out of it, but it's all gone now. Now I don't really feel the same way. [...] It comes with the territory, basically. You learn when you go through it.

Age factor

While receiving CNA training, Dana was also taking prerequisite courses for nursing at a local community college. She found the training at the community college helpful in refreshing her academic knowledge, and she had no difficulty with the math and English portions of CNA training. However, Dana remembered there were some people who had trouble, especially those from non-English-speaking countries. Dana considered the math section of the CNA course “a piece of cake” and did not think her foreign classmates would have had a problem if the course had been in their own language.

Dana said that most students at the organization were foreigners, and everybody in the program was a mature adult. Although there was no group with which to compare the maturity and experience levels, Dana noted that age was an important factor for her when considering being a CNA:

Age is definitely an issue because you have to be in good health in order to help people who are not in good shape. You should be fit in order to be a CNA. Run around, help patients. [...] You should definitely understand what [patients] are talking about. Your English is supposed to be in a certain level in order to understand them.

Career Development

Dana strongly believed that the training at the nonprofit organization prepared her for the workplace. After being hired, Dana received additional training at the hospital before actually being assigned to real patients; she did not think she would have done well without the CNA training.

When asked about her career goal, Dana said that she wanted to work as a CNA to see if she should pursue nursing as a career. After she had clinical experience, Dana knew it was what she wanted to do. At the time of the interview, Dana was a new graduate of nursing school and was studying for the National Council for Licensure Examination for Registered Nurses. Looking back her at her career pathway, she strongly recommended the program: “I would suggest everyone who wants to be a nurse to take this [Red Cross] course and work as a CNA to see if they’re going to like the field or not.”

Dana added that people would learn more as they spent more time in the field. If there was anything that the program could improve, she wished for more training time.

Compared to nursing programs for RNs, Dana found that CNA programs lacked clinical opportunities. And if CNA students had as much field experience as nurses, they would be better prepared.

Case Study 8: Sarah

(Voice recording not available)

Sarah obtained her CNA training from a local nonprofit organization. Since working as a licensed CNA, she had been on track to become a registered nurse. She said that she enrolled in the nonprofit CNA program simply because it was the closest. Sarah perceived the program as “typical” CNA training and stated that, because of the CNA exam, all CNA courses would be similar to each other in terms of skills taught. Although the program durations could vary, especially between RVTH and short-term career-training programs (three years versus less than two months), Sarah considered the training contents basically the same. No particular soft skill was mentioned during the interview. Sarah did not find the need for extra help for math and English because what CNA coursework required was “simple” and “easy.” As an adult going back to school, Sarah also thought she was more mature and experienced than young students in general but not particularly compared to those in her classroom.

When it came to the culture and atmosphere of the program she experienced, Sarah said that most of her classmates were aiming to be in the medical field, and they had a culture of common interests for that reason. Her training experience was useful for her career as a CNA, and, most significantly for her, she was hired immediately after completing the program. Sarah strongly believed that the program prepared her for the

workplace and gave students the opportunity to meet with potential employers in their clinical experiences. Sarah was in general content with the training she received from the nonprofit organization and could not find anything particular that the program needed to improve.

Regional Vocational Technical High School—Practical Nursing Students

Case Study 9: Rozy

Rozy is a 2014 graduate of technical school. She studied cosmetology in high school but decided to change her major to healthcare, which met her “very much high expectations.” At first, Rozy thought the practical nursing (PN) program was a “weird in-between program” that belonged neither to registered nurses nor CNAs. She did not consider the program a fit for her until she actually tried it out. At the time of the study, Rozy described the program as “much more involved,” with “lots of hands-on learning” and lab experiences.

School Choice

Decision factors

Rozy listed the factors that contributed to her decision to enroll at the technical school PN program. Without a doubt, the school was a comfortable place to study, and she found the program tuition reasonable and affordable. Rozy also learned the PN program had an exceptionally high NCLEX pass rate: “I don’t think they had anyone fail.” In addition to the appealing exam statistics, Rozy knew that she would be able to get all the credits she needed to be a PN. She also liked that she lived only twenty minutes from the school.

Skill Building

Hard skills

During the first term, Rozy learned the basic CNA work. Students did laboratory work on giving bed-baths and transferring patients, and they performed those skills once they were out in clinical training as well. After focusing on medication administration during the second term, Rozy was in the third term at the time of the interview and had started practicing catheterization, sterile field, and wound care. Rozy said that the program “progressed from bathing someone to packing a wound.” She was very comfortable with wound care, in particular, as she practiced it repetitively for an open-house demonstration. Rozy admitted that not everyone had that opportunity, and she just “happened to be with the group with wound care. [...]”; she said, “It depends on where you are, what situations arise.” Although Rozy felt instructors honed in on what skills students needed extra help with, she personally struggled with catheterization:

Catheterization, I feel kind of apprehensive. [...] I kind of tried out, and then they were like, “Oh, you’re okay—we’re good.” I feel like it wasn’t as honed in on because they knew that I knew the textbook skills. I’m still uncomfortable, like, trying to do it myself if my instructor is not next to me. I haven’t done one in a clinical setting yet. The situation hasn’t arose. [...] I feel like I would have to take a few minutes if I were to be put in the situation to do it.

When asked about her significant experience at the PN program, Rozy shared her maternity rotation experience, where she had the opportunity to watch an epidural. While standing as a student nurse, Rozy encountered complications in the maternity setting that pressured her to apply her automated skills without conscious thought:

The woman’s blood pressure kept dropping and dropping and dropping. They lost the baby’s heart rate, and it got to seventy-one over thirty-six; she started

vomiting. I realized how you don't really think when you're a nurse, you just start doing things. [...] We were doing comfort measures—"Do you need a towel on the back of your head? How are you feeling?"—monitoring the blood pressure, letting the nurse know what's going on. I think that was the biggest change for me because after it was done, and my teacher was talking to me about it, she was like, "Did you stop and think about any of that?" I was like, "No, it just happens!" If you don't know what you're doing, you know? [...]

Rozy did not volunteer information about soft skills acquired.

Age factor

Although Rozy was a relatively recent high school graduate, she felt she needed more training in mathematics and English. Since students needed to know math for dosage calculations, the program provided a refresher course and required students to pass tests in order to advance. During the first term, students were required to get a score of ninety or above, and then eighty or above in the next term. Rozy was, in general, very comfortable with applied mathematics but admitted she would appreciate some extra help. She also mentioned that she would welcome some brush-up classes for essay writing. Rozy believed her high school writing classes had higher standards than the PN classes and hoped to brush up on her writing skills: "I feel like I could brush up on some subjects, but I don't think it's brushed. I need brushing up to the point that I'm competent in what I'm doing." Rozy did not find any issue with science, and although she was terrible at history, she did not find it necessary, except for Florence Nightingale.

When asked to compare herself with those who had just graduated from high school, Rozy responded that she was more mature and experienced than younger students in some aspects: "I do have some financial responsibilities I never had before. There are two girls that came fresh out of high school. Even though it's only a one-year difference,

you can see the independence versus the dependence on parents. That has made me mature a bit.” In other instances, Rozy thought the younger students were just as mature as she was: “It’s situational.”

High School Experience

High school choice

After graduating from technical school with her cosmetology license, Rozy worked in a salon for about a year. She was not happy with her career because it did not seem to lead her to continuing education. Rozy even felt that she was “perceived as kind of dumb.” She wanted to be in a field where she would be respected and keep learning after college. She found healthcare appealing and thought it would satisfy her wants and needs. At the time of the interview, Rozy said that the program had met her expectations and shown her a different career pathway and experiences:

In high school I was more focused on sports. I played soccer. I wasn’t really focused on school at all. I mean, I got good grades, I was in high classes, but I didn’t really try. Transitioning into this [PN program] was a huge difference. I did a complete 180. I am like the organization guru of my class. I make color-coded schedules; I’m way more on top of things because I like what I’m learning. High school and this is night and day.

When making a choice for high school, Rozy chose to enroll at the technical school. Her hometown friends had trouble leaving their friends, but Rozy recalled that she did not have that issue:

My older sister went here; my dad went here. It’s like a family school. [...] I saw it as a bigger opportunity. I would be not just sitting in a classroom all day, which I’m not into, and I live in the same town as my friends still, so I didn’t see it as an issue at all. I made the choice right away, and that was it. I went for it.

During her freshman year, Rozy explored seven out of fourteen shops and found her aptitude and talent in drafting and cosmetology. She wrote down cosmetology, drafting, and electrical as her first, second, and third choices, and she was placed in her first choice. Rozy liked the creative side of cosmetology. She did not tour and experience health services during the exploratory year, but she believed that she would probably have liked it if she had had the opportunity.

High school skill building

As for academic skills, Rozy did not think that she carried anything over other than that she became “smarter and more articulate.” At the time of the interview, Rozy was still utilizing some of the skills she learned in cosmetology: “I cut everyone’s hair, of course. Everyone loves a free hairdresser.” When asked about her most significant experience in high school, Rozy said it was the free services that cosmetology students offered to members of a nursing home:

It was the smallest things, like doing a manicure, and you’re a sophomore, and you don’t remember the steps of a manicure. It was actually pretty pathetic, but they were so grateful and so happy, and it’s like you don’t realize they don’t get to do this. I think that stuck out most for me in my high school career because every time someone would come in for a service from then on, I knew I was helping them. I knew I was making them happy even though it was something so small.

Rozy wished that the program had more laboratory practice time. Although teachers informed students that they could always schedule more time to practice, Rozy felt that it was difficult to work around her schedule as well as the teachers’ schedules. She suggested “designated times to practice skills.” Since being a PN requires motor memory, Rozy wished to practice skills multiple times before a real situation. And when

that situation arose, Rozy hoped to say, “Okay, I’ll do it!”

Case Study 10: Pamela

Pamela had ten years of experience as a CNA and sought to boost her career with a PN license. She enrolled at the technical school with many expectations, which mostly had been met. Pamela said her experience in the PN program was, in a nutshell, “challenging.” Although some parts were really easy because of her CNA background, Pamela often needed to unlearn some skills she had built over ten years “in order to do [them] to the standard now and to the standard of an LPN.”

School Choice

Decision factors

At the time of the study, Pamela worked full time to provide for her two children, a ten-year-old and a six-year-old. She chose the technical school PN program because of the convenient hours and the vicinity (she lived approximately twenty-five minutes away). The program being accredited was an advantage, too, and Pamela had numerous friends who had graduated from the program with great results. Because she was working full time, the part-time PN program often felt full time. She confessed her struggle and said, “It takes everything you have.”

Skill Building

Hard skills

After working as a CNA for ten years, Pamela thought that she knew exactly what she was doing, but had to unlearn some skills as simple as bed-bathing: “They give you

step by step and you're like, 'I've been doing this wrong for a while.'" Pamela found physical assessments comparatively easy because of her background but struggled with others like immunization that she had never known about. Pamela noted that instructors really took their time to make sure students went head to toe and explained what nurses were doing every single step: "You find something that could have totally—you would have missed, and it explains the whole reason why the person is ill to begin with." For Pamela, it was very crucial to learn catheterization skills, which she had seen done but never done herself: "It's completely different from seeing it to doing it—huge difference." For a safe medication administration, Pamela said that there were steps nurses need to go through and an abundant amount of knowledge students needed to know to be a PN:

You see the nurses do it, and you think, "Oh, that looks so easy," and they're just popping pills into the thing. There's really every medication they know, and they know, "Well, if they're getting this one, they can't this one." The knowledge of pharmacology that you have to know is insane, more than I would have ever have thought. It's amazing how much relies on the nurse to catch things like that, which is really impressive.

At the time of the interview, Pamela had started her maternity rotation, where she had the chance to view a live birth. As a mother of two children, Pamela found it different but incredible to see the whole process from start to finish, with someone to whom she was not emotionally connected: "It was an amazing experience just to witness that [...]. The family was so welcoming. When you said congratulations to them, they're, 'Thank you for being here.' It was just incredible. [...] You're crying behind your mask." Pamela said that she and her classmates might get to see a C-section soon, and she

expected that that would be her most significant experience. Pamela did not volunteer information about soft skills acquired.

Age factor

Although there were different age groups in the classroom, from students who had just graduated high school to those older than Pamela, Pamela said that the program was doing a good job reviewing mathematics, which did not bore her but reminded her of the basic rules and skills she already possessed. English, on the other hand, was a challenge. Learning APA style, in particular, was a challenge, but Pamela credited her teachers for the “helpful” training; if she wrote ahead, Pamela asked her teachers to review her writing before handing it in.

When asked about classmates who just graduated from high school, Pamela replied, “They’re down to earth, they’re focused, they’re kind.” She personally worked with one classmate who came to Pamela’s workplace as a co-op student from the technical school and then later became a full-time worker. Pamela said that she was young but great. Pamela considered herself one of the older ones and often felt she was more immature than the younger students: “Just sometimes I get stressed out, and I get goofy because I just need to break the tension, and then I’m the one that’s not mature.”

School Culture

Pamela was particularly content with the teachers’ support. She openly admitted that she had an attitude problem, especially when she was tired, but teachers understood that she worked full time and helped her overcome by finding a better way to calm her down:

The teachers are awesome, the faculty. They really care. They don't just do it as a job. They want you to do good. It was difficult in the beginning [...]. I do have two children. I am in school. Sometimes I get a little overwhelmed, and they have a way of being able to bring me back down, which is really good. It's a great program.

Pamela also felt lucky to have a mentor at the clinical site, who eased her transition from laboratory to clinical settings:

Before you can do anything you basically have to tell her what you're doing, why you're doing, how you're going to do it, every skill. It's not just the MED PASS. It's not just hanging an IV bag or assessing an IV site. It's every little thing you do with them. She's one on one with you. I don't know how she does it because there's six or sometimes more of us at a time, and she dedicates her entire night to making sure all of us are doing what we're supposed to do. It's just incredible.

High School Experience

High school choice

Pamela went to a regular high school but changed her thoughts about going to a technical school: "Looking back I probably should have [gone to the technical school]." Pamela perceived regular high schools as "generic" and "where everything is taught the same." Since her older brother went to the hometown high school, Pamela just followed in his footsteps and did not think about the school choices available to her: "I never really thought about it. It's where you went." It was after high school that Pamela really became the person she was. For Pamela, high school was "like a blip on the radar" as she "stayed low the whole time" and tried to do what she had to do to graduate: "It wasn't really like you wanted to do. It was more you had to do. I don't miss it at all, not at all."

High school skill building

Pamela took numerous advanced classes in high school, such as trigonometry,

precalculus, and physics. When it came to nursing, Pamela believed that the knowledge she obtained from anatomy, physiology, mathematics, chemistry, and some extra science was helpful. Pamela perceived that her chemistry knowledge, in particular, helped her have an understanding of medications and of how they actually work.

High school culture

Although Pamela did not attach much importance to her high school experience, she cherished the memories of traveling to New York and Canada with her band, chorus, and a cappella groups. Since she enjoyed traveling and singing, Pamela considered those events “the best thing[s] that happened” to her in high school.

Even though Pamela was content with the PN program and its strong support from instructors, she found it difficult to balance her life and school:

I have two children. I also have a father-in-law who's very sick. My husband's the only child that's near. [...] When he has to go to the hospital to be with his father, I have to be home with the children. Sometimes that's on clinical hours or something else. There's nothing I can do to control it. It's not like I'm skipping to have fun. I would probably rather be there than with my children sometimes. It's hard to make up those hours. They do give you opportunities throughout, but it was a really tough year between my son getting sick, I had strep throat and couldn't come two days because I was contagious, and then my father-in-law being in the hospital. He's a three-time cancer survivor. He had stomach cancer, prostate cancer, and esophageal cancer. He has no esophagus. He only has half a stomach, and it's stretched to make him a new esophagus. He gets really sick really easy—like pneumonia he's prone for. He gets it; he's down for a while. My husband has to go there to be with his mom who's also elderly and help with that. It's really difficult to try to choose between you're going to go see your dad, or I'm going to go to school because if you don't go, you get written up, you get reprimanded, you miss hours. I think that's the hardest part. I wish there was a schedule where, “Okay, you had a legitimate reason why you weren't here. We have these makeup dates for you.” They don't have that. That's the only thing I wish was a little more available to us.

Case Study 11: Tiffany

Tiffany graduated from high school in 2007 and then went to college for nursing in Rhode Island. However, Tiffany was tired of being kept wait-listed for the nursing program for three semesters after completing the prerequisite courses: “I would retake a course just to try to bump up my grade a little bit. I met the requirements; it was just more so competitive, like they’d only take the A students, and I had like an 89. [...] I just got fed up with it.” Tiffany decided to find other programs and try to keep advancing her career. She said that she applied to the technical school RN program “on a whim.” While not expecting that she could get in, Tiffany received a call for an interview and was accepted immediately after: “They’re like, ‘You’re in; let’s go.’ I was like, it was meant to be. It was.” Tiffany believed that she was fated to join the PN program and said that her experience at the technical school had been “pretty good.”

School Choice

Decision factors

Tiffany chose the program for a few reasons. To start with, she qualified for an in-district tuition rate. Tiffany counted the vicinity as another contributing factor because she needed to drive only twenty-five minutes to get to the school. Since it was an evening program, it did not interfere with her working schedule. While working full time at the time of application, Tiffany found evening and weekend classes a good fit for her schedule.

Skill Building

Hard skills

Tiffany said that students had to learn a set amount of skills every term, and they needed to pass the set in the laboratory in order to apply the skills in the clinical setting. Tiffany found that system “reassuring” because it helped her believe that she could perform the skills with real patients: “I did this. I can do it again.” Although scenarios changed and often got tougher during clinical training, Tiffany understood such challenges and reminded herself that, “It’s not a dummy. It’s a real live person.” She said that she was still getting nervous from time to time as “a novice nurse” but overall felt comfortable about applying the skills to the clinical setting: “Some patients aren’t going to be as easy as the stuff you deal with in lab. It’s most just acclimating yourself to that setting. As far as the skills go, step by step how to do things, I feel like they do a really good job here.” Tiffany credited her instructors for giving her detailed instructions and clear expectations.

Soft skills

Tiffany was the only PN interviewee who emphasized a particular soft skill during the interview: “Time management is something that I’ve found that I didn’t really have before.” Tiffany shared that her biggest struggle had been balancing work life, home life, and school while trying to succeed in school. After starting the program, she realized that there were “a lot of outlets” that she did not anticipate. Tiffany had to cut hours at work, which affected finances at home and put everything on the back burner, which was hard to explain to her family: “You think it’s three nights a week, and it’s one weekend a

month—I can deal with that. [...] It’s all the other things that you have to do to succeed here [...] I think you can get by, but if you really want to do well, then you really have to make sacrifices in the other areas of your life.”

Despite her struggle, Tiffany had a noteworthy experience during her recent clinical visit: “Obviously, you’re in the setting of a nursing home—there’s people who pass. But this was like he was actively dying while we were there. [...] As practicing student nurses, we were there listening to his last sounds. That’s something I’ll take away from this for a long time.”

Age factor

Tiffany accepted that she had not had much math training since high school graduation and initially felt very nervous about the math portion of the RN program. Once she started dosage courses, however, the basic knowledge she obtained in the past came back, and Tiffany just had to learn how things were done in practical nursing. Tiffany passed the dosage exam on the first try and was so confident that she could practice it without any difficulty.

When it came to maturity, Tiffany believed she was, in general, more mature and experienced than those who had just graduated from high school:

I don’t think that my potential is any better or different than theirs, but [...] there’s just stuff in life that you have to get through as an adolescent. [...] Not that they won’t be good nurses or that I’m a better nurse because I’m older, it’s just more like things that you sort of get to say, “I’m done with that. It’s in my past. I’m not an adolescent anymore. I’m an adult. If I were them, I would have loved to do this program when I was twenty. Then you have so much time to carry on with a RN, a BSN [...].

High School Experience

High school choice

Tiffany went to a private Christian school, from kindergarten through twelfth grade. It was her parents' choice initially, but Tiffany embraced the school as part of her identity. Tiffany struggled when she was sent to a public high school for a few months:

My junior year of high school, tuition went up substantially. I have three other siblings, so my parents decided it was best that we all got pulled out. My other siblings were in the middle school, and I was in the high school, and my parents knew it wasn't good for me. It just wasn't a good fit. [...] They let me go back. I only spent a quarter of that year at public school, and they let me go back, and I graduated, and I was successful.

High school skill building

Tiffany said that the courses at the Christian school were college-oriented, with the general curriculum being an AP level of public high school. Tiffany was surprised to find out that she still remembered an anatomy course she took ten years ago; she found it helpful for the anatomy and physiology course she took in Rhode Island, as well as for the PN coursework at the technical high school: "There were little bits and pieces I remembered from high school that I applied when I took them [in Rhode Island], then applied here." Tiffany also took mathematics and other generally required health courses in high school but admitted that she was not interested in those and did not find them particularly helpful while advancing her career.

Tiffany regarded her high school as straightforward; it provided regular math, science, and English classes: "It wasn't like a school like this, where I actually come out with a new trade or anything." Her Bible classes, however, taught students about family

and helped Tiffany incorporate the Bible in her family as she grew up. Although unclear about the relationship to the Bible courses, Tiffany shared that she built socialization skills in high school that reminded her of the school bullying problem: “I feel like I treated people pretty well. [...] Going back, I would have been a lot nicer to those quieter kids. That’s just something that’s always stuck with me is I would try to be an advocate for those people. I really wasn’t. I just kind of went with the flow.”

High school culture

Tiffany was a cheerleader in high school and said that cheerleading was an important part of her high school life. Her school was small, with just fifty students in her graduating class. For Tiffany, such a small school winning the state championship for basketball became a memory she would never forget.

When asked how she would improve the school, Tiffany said that she was not “a fan of the [current] grading system.” Until a year before the interview was conducted, she was able to simply sign on and see her grades privately from the computer. Now, Tiffany had to stand in line at the end of every night to check her grade, which made her feel “obligated” to tell others what she received. “I wish the grades were just on the computer; you can check them at home. That type of thing is something I’d definitely change.”

Case Study 12: Barbara

Barbara was a PN program senior who would be graduating in 2017, about eight weeks from the time of the interview. She had three children and a CNA background. Barbara said that the program had really helped her grow and think in a different way.

Her science knowledge and interpersonal skills had both improved in the PN program, illustrating the focus on both hard and soft skills.

School Choice

Barbara was working in a nursing and rehabilitation facility near the technical school. A co-worker who had graduated from the school had good things to say about it, and Barbara decided to apply without much hesitation: “I kind of threw it around for a couple of months, and I just did it. Just printed the application and stuff. I got my letters written, I took the TEAS test, and I was here. That’s how I got in.”

Skill Building

Hard skills

Barbara said that she had learned “holistic” patient care. Students typically learned basic patient care skills, such as performing tracheostomies (suctioning), taking blood sugars, knowing corresponding sliding scales, and following doctors’ orders. Barbara, however, believed she was learning not just a set of skills but something that covered everything: “Yes, you can take care of their hygiene, but yet how to prevent bedsores and eating well, and just kind of pushing certain things you have to push with different people to make them healthier, I guess.”

During her clinical training in a hospital setting a semester before the interview, Barbara had many opportunities to practice the tracheostomy care. She said that having those experiences was indispensable, especially after seeing many patients who tried to pull the suction out. Through her repetitive training, Barbara had a better understanding,

digested the reasons why the suction needed to be connected, and learned what to do with the patients who did not comply. Implying how important skill it is, Barbara regarded the tracheostomy training as the most significant experience she had in the PN program.

Barbara did not volunteer information about soft skills acquired.

Age factor

Even though she had graduated from high school more than twenty years before, Barbara did not feel the need for extra help in mathematics and English. She believed that going to college and also helping her children with their homework kept her academic knowledge current. In addition, preparing for the TEAS test, which she needed to take to get into the PN program, reminded her how to focus and study: “All I did was, when I got a book I kind of focused on—okay, if I didn’t know the answer, I would go and say, ‘Why was that the answer? Oh yeah, [...] that’s why you put a semicolon there.’ I’m pretty active in life, so it’s not like you forget certain things.”

Barbara felt that she was more mature and experienced than younger students in some ways. She was already a mother of three children, but many of her classmates were just starting families. Barbara accepted that there were some differences between her and the other students, but she believed that they were all working toward the same goal, which brought them together despite the differences.

School Culture

When it came to the general culture and atmosphere of the classroom, Barbara accepted that there would be cliques, but students all “come together” at certain parts as they shared common interests and were moving toward the same goal: ““Did you get the

answer to this question?’ ‘What does it mean?’ I think we’re dynamically different, but then we all kind of come together as the needs happen throughout the class.”

Career Development

Barbara believed that the training she received in the PN program had prepared her for the next step of her career:

I think, of course, there’s always going to be that newness about it and whatnot, but they’re preparing us pretty well. I’ve seen some of the other people that have graduated, like, just recently [from the technical school] and how they’re doing well, and they feel that they’ve been well prepared. I think that we’re going to follow in the same footsteps. We got a lot of good training from a lot of good nurses that have good experience. My mother was a nurse, so I welcome that experience. I’m glad. That makes me more comfortable.

CHAPTER FIVE

Summary, Discussion, and Conclusions

Summary of the Study

The purpose of this study was to develop an understanding of the ways in which educational experiences might differ in a regional vocational technical high school (RVTH) and short-term career-training programs. A particular industry, healthcare, was chosen for its high demand and short supply of labor in the state. The study was a qualitative case study that primarily utilized in-depth, one-on-one interviews with semi-structured questions. The participants of this study fell into one of three groups: seniors in RVTH health services, students in the RVTH postsecondary practical nursing (PN) program, and certified nursing assistants (CNAs) who received CNA training from short-term career-training programs in Massachusetts. The researcher collected additional qualitative data through various sources such as classroom observation, field notes, program descriptions, lesson plans, syllabi, and class materials. The interview data were transcribed, segmented, and coded, and any relevant qualitative data were later added to supplement the interview data. There were four consistent areas raised across participants that suggest salient components of their experiences. First, school choice was made by students themselves in the cases of RVTH seniors, which might have influenced the culture of togetherness and acceptance at RVTH. Second, shop instructors played an important role in creating a school culture, where students helped each other and accepted everyone. In particular, the instructors' emotional support seemed to differentiate the educational experiences of RVTH seniors from the rest. Third, all RVTH seniors

frequently identified soft skills such as communication and time-management skills, whereas other participants focused on technical skills, when reflecting on their educational experiences. Lastly, RVTH seniors strongly believed they are career-ready and were mostly confident of their future plans. The following sections discuss the researcher's interpretation of the findings.

Discussion of the Findings

In-Group Comparison

Regional Vocational Technical High school—Certified Nursing Assistant students (Health Services students)

Common themes—school choice

Participants in this study were asked who made the decision to enroll them in RVTH. Julia and Maria had family members who went to RVTH, and Sophie was influenced by her father, who had heard about the technical school system on NPR. All five RVTH seniors clearly indicated that it was ultimately their choice to come to RVTH. The seniors compared their experiences with that of their friends in regular high schools. Ariana mentioned that her friends in regular high schools got bored easily in school, and Julia said that her friends regretted their decision not to go to the technical school. It was perceived that participants found their experience at RVTH more interesting and future-oriented than what they might have experienced in a regular high school. Students explained that their friends in regular high schools would not have enough information to decide on a career pathway. Julia said that her friends did not know whether they wanted to be a nurse and “are kind of stuck” as seniors: “They don’t know where they want to go

in life.” Sophie did not believe that her friends had “the opportunities to see different jobs that they would eventually do in the future [...], in the next five years and the next ten years.” On the other hand, Heather said that RVTH students had “a head start,” and Maria believed that the school prepared her for the labor market. Julia also believed that she was “more prepared for the real world.” Maria believed that her CNA certification would give her a steady job, unlike her friends who might end up at local retail stores.

Common themes—school culture

All five participants spoke about how school culture influenced their educational experiences and shaped their character. The characteristics particularly visible in the discussions include enthusiasm, kindness, and reverence. Ariana said the school had a warm and welcoming environment, and Heather said the school had a friendly atmosphere where “everyone accepts everyone.” She found it surprising that even the administrators cared about the students and called them by name. Ariana said that they were all “one big happy family.” Julia said that the fact that everybody made the choice to attend RVTH might have influenced the culture of acceptance and togetherness. Maria added that because students tried hard to get in, it meant that they wanted to be in RVTH, thereby improving the overall atmosphere. Most importantly, participants experienced “the shop family” for three years with the same instructors and classmates, which taught them the idea of helping and embracing each other. Maria stressed the critical role of shop instructors in the family culture: “I feel blessed to be into this shop and then have such caring teachers. [...] We’re basically their children.” Sophie said she learned from her teachers how to stay passionate about one’s job. Health services instructors also

believed school culture had influenced the character development among students, and two instructors pointed out “role modeling” as the way of promoting character qualities. Instructors understood that strict rules could be very hard for teenagers and set a good examples for their students, starting from the basics, such as “how to say thank you,” “how to hold the door,” “how to look someone in the eye,” and “how to shake hands.” In addition to the academic and technical help, instructors’ emotional support was a critical part of the shop family. Heather said that instructors who tried to connect with her on a personal level influenced her most and made a difference in her character and educational experience; she learned how to be respectful and how to lead a group of students. This implies that students need teachers with genuine concern for their students—teachers who try to make meaningful relationships.

Due to the hygiene requirements of the industry, there were strict department rules from health services on uniforms, hair, and nails, but all students understood the rules as part of the real world experience that helped build “professionalism.” Maria considered the guidelines “a good thing to already be exposed to” because she would have those once she has a job. Heather said that the rules taught her “to be professional” and “to continue to progress.” Sophie called the uniform policy “the real life skills” that she would need as someone taking care of others. Health services instructors also recognized the importance of strict rules and policies. One instructor believed that strict uniform policy, such as hair up above collar and no fingernail polish, helped students build work ethic and attitudes. It was also found from a classroom observation that instructors frequently use terms such as “professional” and “professional look.” An

instructor recommended the use of hair bands for those with layered hair to promote professionalism. Another instructor said that RVTH did not have a strict no-cell phone policy unlike other schools. She believed that such strict policy “doesn’t work” and it is likely “the kids and the teachers clash.” At RVTH, instructors taught students how to use their phone appropriately and “respectfully,” by politely asking teachers’ permission. Furthermore, students listed cleanness as part of the RVTH culture. Maria said that the school was clean because “everybody loves this school,” and Heather said that students were taught to have “ownership of the school” for the cleanness.

Common themes—skill building

Participants in this study were asked in many different ways what they learned in high school: (1) “Tell me about your high school experience”; (2) “What did you learn in high school?”; (3) “What kind of skills did you learn?”; (4) “What was the most significant experience in high school?” Reflecting on their lab and clinical experiences, participants described various hard skills that they were required to learn as a nursing assistant. Students learned how to give bed-baths, transfer patients, give CPR, and take pulse and temperature. Sophie said that all of the skills she learned over the three years were for the CNA test. Considering the fact that students on health care pathways would need related certificates or licenses to enter the labor market, skills acquired at RVTH seem to be aligned with what the CNA test requires. Such alignment is likely to exist with a few more entry occupations in which health services students obtain relevant certifications, such as home health aide and dietary aide. While discussing the hard skills, three students credited instructors for their skill development. Julia said that she received

“constructive criticism” from the instructors. Ariana believed she was confident about the technical skills because her instructors always made sure that students were comfortable and not struggling with any skills. Sophie also credited her instructors for giving students “the right amount of time and enough time to get the skills down.”

Reflecting on their educational experiences, participants remembered soft skills more often than hard skills. All participants mentioned communication skills, and three participants mentioned time-management skills. Sophie, Heather, and Maria remembered communications projects from freshman year that taught them how to talk with people they had never met. Heather said that she learned different ways of communicating with people who were blind or deaf or had developmental disabilities. As for time-management skills, the RVTH schedule, which allowed students to be in academic class or shop every other week, taught students how to manage time efficiently. Julia said, “I’ve learned how to budget my time, [...] keep focus on both areas of practice, and keep my grades up in both of those.” Students had to be more organized and have “everything done in order,” like Ariana, and had to make deadlines instead of procrastinating, like Julia. Students also learned how to be more flexible in their learning experience. Heather said she learned from teachers’ different teaching styles, and Julia learned how to deal with different people. As a result, Julia built interpersonal skills and now had “a thicker skin.” Participants identified a few more soft skills that they developed, such as responsibility, maturity, and compassion—skills needed to take care of others.

Other crucial topics discussed by participants were clinical experience and shop choice. Students were asked what they believed to be their most significant educational

experience. Two students said that getting accepted to health services was most significant. Wanting to pursue her career in nursing, Ariana realized during the exploratory year that she could be happy in health services. When placed in health services, Maria also recognized that she wanted to be in this field. It seemed that both Ariana and Maria had a strong calling toward nursing. Although individual stories were unique, clinical experience was particularly significant for three students because of the human factor that genuinely connected them with residents. Julia pinpointed her first clinical day as “a turning point” that changed her future and said she was still visiting her first patient from time to time. Heather was fascinated by the real impact that she could make on someone’s life as a nursing assistant, especially unmotivated residents. Although not a happy moment, Sophie considered the passing of one of her patients the biggest event in her life. She had to understand the human process and deal with the death, which required her to recognize her feelings and emotions and build her emotional intelligence. As emotional support from instructors was a vital part of school culture that influenced students’ educational experiences, having meaningful connections with residents also became a significant part of students’ educational experiences.

Common themes—career development

Participants in this study overwhelmingly believed that the program prepared them for the workplace. Julia found herself ready to work as a CNA: “I can just jump in. [...] I can just go in someone’s room and get them up and dressed for the morning.” She said she was ready for both college and the workplace. Maria was also confident that RVTH had prepared her for both college and the workplace because it helped her

understand “what the real world is like and what actually being a CNA would be.” Maria imagined the first day of clinical in nursing school, where everyone would get nervous: “But you had your first day of clinical four years ago. You can jump in, [...] just help other people too.” Ariana believed that the soft skills she built in the program helped her get her current job as a nursing assistant and planned to get a bachelor’s degree in nursing. Julia explained that students were enforced on knowing their career goals. She wanted to be a registered nurse, get a nurse practitioner license, and ultimately become a primary care person for families. Maria wanted to be a speech pathologist. Despite their college and work readiness, however, not all students planned to pursue a career in the medical field. Although they did not clearly mention alternative careers, Sophie wanted to “make people’s lives better,” and Heather planned to work and travel.

Participants also credited many career-related activities of RVTH for their readiness. Sophie and Maria talked about the career enrichment class that helped students write résumés, cover letters, and portfolios and prepare for mock interviews. Julia also mentioned various workshops and the guidance counselors who helped her prepare for college. Maria once again credited her shop instructors for preparing her for “everything,” so she had never felt “left behind.”

Other noteworthy observations

While participants mentioned the family atmosphere in shop, Maria added that her experience in the student council was another “huge family atmosphere.” By planning school events at the student council, Maria was able to learn “leadership skills,” an element that was not directly mentioned by others while discussing skills learned in

school.

When asked about hard skills, four participants indicated the skills they learned in shop — except Julia, who reflected on the hard skills she obtained from academic classes. She called them “real life” and “employability” skills; she learned how to pay for a house and balance checkbooks, with additional information on how mortgages work.

Although other participants mentioned professionalism when discussing the uniform policy, it was interesting to see that Maria pinpointed professionalism as the skill that tied everything she had learned together, including interpersonal, communication, and teamwork skills. As a part of professionalism, Maria identified teamwork skills, an element not directly mentioned by other participants: “Whether you like them or not, you need to put that aside and be professional and be able to complete the task [together].”

There were a couple more interesting elements significant to particular participants. Sophie applied to RVTH after her father heard about the technical school system on NPR news. Media became a marketing tool that encouraged a family to know more about vocational education and suggested a direction for learning. Although it is not related to the skills acquired in the program, such factors were significant to the educational experiences of the participant and her family. It was also interesting to see instructors prioritizing safety in their teaching. Teachers reminded students of basic skills such as handwashing and proper lifting techniques to prevent back injuries. By blending safety into routine patient care, teachers identified mastering this skill as a priority. There were a variety of characteristics and interesting stories that individual students shared.

Although each one of them is significant, the discussion section focused on showing similarities and differences between cases.

Short-term career-training programs—Certified Nursing Assistants

The graduates of short-term CNA training programs chose the program commonly because of distance and price. As for hard skill learning, participants had similar educational experiences; they learned basic nursing skills, such as how to turn and transfer a patient, in both classroom and clinical settings.

Common themes—skill building

Age factor. As it is anticipated that adult students will have some gaps in their academic knowledge, many career-training programs provide additional classes for mathematics and English. However, participants who obtained CNA training from short-term programs did not express the need for extra academic classes. For John, what CNA math and English required was “comparatively easy skills,” and Dana and Sarah agreed that the math section was easy and, according to Dana, “a piece of cake.” John and Dana did say that there were some foreign students who struggled with math and English.

It was thought that younger students might be at a disadvantage in terms of experience and maturity, and both John and Sarah felt that way. John said that he would not have been so mentally prepared had he jumped into the CNA world, with its demanding workloads and overwhelming responsibilities, just out of high school. On the other hand, Dana thought that being younger might be an advantage because CNAs need to be fit in order to help others.

Common themes—career development

Participants who obtained CNA training from short-term career-training programs believed that their training experience helped prepare them for the workplace. John said, “It was adequate training,” and Sarah believed it was “effective” training. After the CNA training, participants typically received additional floor training from their workplace but believed that they already had enough training. Dana strongly recommended the nonprofit organization program for those who wanted to be a nurse. A surprising finding was that participants did not recognize being a CNA as a permanent job—it was seen as transitional. John had the option of becoming a medical technician, licensed practical nurse, or firefighter, and Dana and Sarah were studying to be a registered nurse.

Other noteworthy observations

John noted the instructor support he received from the community college CNA program. Instructors always gave an appropriate amount of time to train: “They didn’t ever do too little or too much on something.” Instructors helped students get confident in their skills. However, it should be noted that it was a kind of support that made sure that students had enough training to do the required skills, not the kind that makes meaningful, personal connections with individual students.

Since students in short-term CNA programs were not required to wear nursing scrubs, the uniforms that helped build the character quality of professionalism among RVTH seniors were not mentioned by CNAs as part of the program culture. However, John personally wanted to experience what the real world was like by wearing scrubs. By

doing so, he was able to build professionalism on his way.

As for soft skills, John and Sarah did not identify particular skills they built in the program, but John mentioned good attitude and compassion as skills required for CNAs, which he possessed before the program. It is worth mentioning that when asked about skills learned in high school, John described a few soft skills: time management, organization, and communication. Dana, on the other hand, said that she learned soft skills particular to the health care industry. It was found from the literature review that communication skills are considered one of the most important soft skills demanded by employers across industries. Stasz (1997) emphasized the importance of communication and teamwork skills in healthcare, which help healthcare providers function more effectively. In a similar context, by understanding her responsibilities and work scope as part of a large care team, Dana learned how to efficiently and effectively report to her nurse or supervisor—a succinct way of communicating. Such skill building seems to be particular to the nursing field.

Regional Vocational Technical High School—Practical Nursing students

Students at the RVTH postsecondary PN program made the program choice based on various reasons. Distance was the most popular answer, and students described course credits, schedule, and a friend's recommendation as equally important factors. Although the number of years of experience was different, three of the study participants had a CNA background.

Common themes—skill building

For some students, their CNA backgrounds were helpful during term one where

students practiced basic CNA work. The skills they learned in terms two and three were advanced and more difficult to master. The hard skills commonly discussed were medication administration and catheterization. Reasonably, students were comfortable with the skills they repetitively practiced. Rozy was comfortable with wound care because she practiced it repeatedly for an open-house demonstration. Such repeated training suggested the importance of the skills in their training. It is worth mentioning that repetition often became an important part of students' educational experience. By repeating the tracheostomy care in hospital training, Barbara comprehended the reasoning behind the suctioning treatment and considered such experience the most significant one in the PN program. When asked about the most significant experience, all four PN students recounted their clinical experience.

Participants credited instructors for their hard skill building. Tiffany praised her instructors for giving detailed instructions and clear expectations, and Pamela credited her instructors for making sure that she understood everything. Although Rozy generally thought that instructors honed in on the skills with which students needed extra help, she also perceived that she was not as comfortable with catheterization as she wished. When it came to hard skills training, PN students had some type of instructor support. However, similar to the short-term program graduates, the instructor support that PN students received, except in Pamela's case (see "Other noteworthy observations"), was a kind of support making sure that students had enough training to do the required skills, not the kind that made authentic relationships with students.

Common themes—skill building

Age factor. Despite the anticipation that adult students would have difficulty with math and English sections of the training, all PN students but one said that they did not have any trouble bringing back their academic knowledge. Pamela said that the program offered a good refresher, and Rozy was very comfortable with math but appreciated some brush-up classes, believing her past knowledge had higher standards than the PN curriculum. Regardless of the distance from secondary education, people had their own ways of keeping their academic knowledge current, such as talking to their school-age children, going back to college, or studying for the TEAS test that all students were required to take to get into the PN program.

When it came to the level of experience and maturity, all PN participants but one agreed that they were in general more experienced and mature. Students believed they were more mature and experienced because of their life experiences, not their potential as a nurse. Participants believed that it might be even an advantage to be younger because of having more career options to explore. They said that the age difference was not an issue between them as they were all moving toward a shared goal.

Common themes—high school experience

The researcher also asked participants if their high school experience was applicable and attempted to examine how they remembered high school. Since those who graduated from high school more than twenty years ago were not asked about high school, one participant was excluded. The high school choice they made as part of high school experience was examined as background information: one made a choice to go to

RVTH but a different shop, one went to a regular high school as a local choice, and one went to a private Christian school because of her parents' choice. While studying in the same facility for her high school diploma and PN training, it was expected that Rozy might experience a school culture similar to that of RVTH seniors. However, Rozy confessed that she "wasn't really focused on school at all" in high school, making it hard to compare her educational experiences (discussed further in "Between-Group Comparison").

Two participants remembered some academic knowledge from high school that they found helpful in the PN program. Pamela believed the knowledge she obtained from anatomy, physiology, mathematics, chemistry, and science was helpful, and Tiffany found an anatomy course particularly helpful. As an example of soft skills learned in high school, Tiffany cited socialization skills. Despite such skill building, however, Tiffany regretted that she was not an advocate for her high school classmates who were bullied by others. Participants also discussed student activities, such as music bands and cheerleading, as part of the high school culture they experienced.

Due to time constraints, the researcher was not able to ask PN participants their career preparation, except for Barbara. Barbara stated that the PN program prepared her well for the next step of her career: "We got a good training from a lot of good nurses that have good experience." It should be noted that career development was not discussed because of the time limitation, not because they did not identify such element.

Other noteworthy observations

Although high school seniors commonly discussed instructor support, Pamela was

the only PN student who mentioned the instructors' genuine concern for students. She was very content with her instructors and said, "They really care." Pamela was often overwhelmed by her work, home, and school schedule, but her instructors helped her overcome the barriers. Pamela recognized that instructors did more than their job of training students with particular skills. From Pamela's case, it was believed that PN students had some underutilized opportunities to experience emotional support from instructors. Moreover, it was found that clinical experience might provide additional opportunities to build emotional intelligence. Pamela said that maternity rotation was the most significant experience and mentioned that it was "amazing" to witness someone to whom she was not emotionally connected going through labor.

Although Barbara briefly mentioned interpersonal skills in the beginning of the interview, Tiffany was the only PN participant who discussed a particular soft skill in detail. Many students struggled in life as a mother, employee, and student, but Tiffany was the only person who linked her struggle with her time-management skills and considered it an opportunity to learn how to balance work, school, and home life. This might be another underutilized opportunity to build soft skills among PN students, which will require more support and structured guidance from the programs and instructors.

Despite the anticipation that students might have trouble with math and English, it was a common response that students in the PN program were comfortable with the required academic knowledge. An interesting finding from PN students was that they needed field-specific academic knowledge. With enough basic knowledge, Tiffany shared that she just needed to learn how things were done in practical nursing. With

strong foundational knowledge, it seemed that students would not have difficulty with the academic portion of the PN program.

Finally, it was interesting that Rozy, who went to RVTH and transitioned to the PN program, perceived her clinical experience as a cosmetology student the most significant high school experience. While providing free services at a nursing home, Rozy realized she was making the elders happy and having an emotional connection with them. Although it happened in high school, this again implies the importance of clinical experience.

Between-Group Comparison

Common themes

Clinical experience. Regardless of the type of training programs and durations, clinical experience was an important part of students' educational experience. Four PN program students and three high school seniors considered their clinical experiences the most significant. Although not specifically indicated, short-term program graduates also implied the importance of clinical experience. Dana mentioned that CNA students would benefit from more field training. Not only that clinical experience was crucial across three participant groups, but some even remembered a similar experience from their clinical visits. Tiffany, of the PN program, recounted her experience of listening to the last sounds of her patient. Similarly, Sophie, one of the high school seniors, remembered the death of her patient.

Hard skills teaching soft skills. Findings on student experiences also revealed how soft skills were involved in learning hard skills. Although none of the interviewees

identified the connection between hard and soft skills, students were required to master certain nursing skills and expressed that such mastery of competencies was done through constant practices and repetition. Sophie from RVTH said, “If we were not feeling confident then we’d either watch a video or the teachers would show us a refresher, or we’d practice again in the lab.” Rozy from the RN program also practiced wound care repetitively for an open house demonstration. Tiffany from the same program said that students were required to pass a set amount of skills every term before applying the skills in the clinical setting. Throughout the study, there appeared to be a separation in discussions between hard skills and soft skills. However, students were required to achieve a full mastery of certain hard skills for tests and certificates, and it was found that what helped them acquire hard skills were soft skills, such as perseverance and patience. Defining “grit as perseverance and passion for long-term goals,” Duckworth, Peterson, Matthews, & Kelly (2007) found by surveying more than 3,500 college students that grit is a better predictor of eventual success in life than academic scores (p. 1087). Coupled with the findings, this might imply that students need to be encouraged to work toward challenges over several years.

Other noteworthy observations

One of the goals of this study was to examine how things would be different for students coming through RVTH. First, choosing to come to RVTH and spending three years in the same shop with the same instructors and classmates contributed to the culture of togetherness at RVTH. The family culture provided a warm, comfortable place to learn for students—a place where they helped each other and accepted their differences.

Second, instructors who tried to genuinely connect with students were a critical part of students' educational experiences. Such support went beyond training particular technical skills, differentiating RVTH from other programs. While emotionally connected to instructors, students learned how to respect others and keep passion toward their job. Such caring teachers played an important role in creating the family culture as well. Third, strict rules particular to health services helped students learn professionalism and responsibility. Lastly, having a clean study environment was a basic quality that many might neglect but was a critical part of the RVTH educational experiences that helped build responsibility and feelings of ownership of the school.

These four qualities of educational experience seem to have made a difference between RVTH students and the rest, ensuring strong character development. The current study did not attempt to show that RVTH students have an advantage over the rest, but simply students who did not go to RVTH did not identify the same kinds of educational elements.

It should be noted that Rozy, who went to RVTH and transitioned to the PN program, did not benefit from the school culture, a contributing factor for what makes the experiences at RVTH special. As she admitted, Rozy did not put enough "effort" in learning but focused on sports in high school. It is arguable whether she could have succeeded with instructor support that made meaningful, personal connections with her; she did experience emotional connections with the elders to whom she provided free services during her cosmetology clinical experience. Based on what she shared, it was believed that shop choice was a more significant factor in her unmotivated educational

experience. After she transitioned to the PN program after high school graduation, Rozy believed that she made “a complete 180.”

The different findings from different participant groups might have been influenced by the life stages of those interviewed. RVTH seniors (as high school students who have academic schedules to follow) were able to build time management skills by learning how to balance between academic and shop schedules. PN students, on the other hand, discussed their struggles in balancing work, home, and school schedules. Adult students have *financial responsibilities* that might hinder their learning experiences and the opportunities to build more soft skills like time management. Recognizing younger versions of themselves, however, adult participants also talked about their maturity that helped them become more prepared for the competitive world of work than younger students. In the case of John, he did not believe he would be mentally prepared to do CNA work right after high school. Even a difference of a year was substantial to him. As such, student experiences discussed in this study might be the result of differences in what an individual expected to bring or get from the program, depending on their life stages.

Discussion of the Findings in Relation to the Literature Review

Elements needed in the health care industry

One of the goals of this study was to identify elements of educational experience that are directly related to the kinds of outcomes needed in the labor market. Educational experiences of RVTH seniors showed that some of the skills students learned in health services and school in general were consistent with the skills demanded in the labor

market. Turner (2000) and Casner-Lotto (2006) pinpointed communication skills as one of the most important skills in the labor market. All RVTH seniors identified communication skills while reflecting on their educational experiences. Specifically, students recollected their experiences of talking to the residents in a nursing home setting. This is particularly consistent with the findings of Turner (2000), in which employers in Georgia indicated that the most desired skill is oral communication. Although not specified between spoken and written communications, health services instructors also supported the importance of communication skills; one instructor pinpointed communication as the most important skill that she believed that employers were demanding, and she expected her students to obtain it before graduation. Communication was also identified in syllabi of all grade levels, especially in daily evaluation. On the other hand, Casner-Lotto (2006) found that high school graduates are deficient in written communication, which was not specified in the discussion of skill building with RVTH seniors.

RVTH seniors also did not particularly indicate professionalism when asked about skill building, except for Maria, who explained that professionalism tied together everything she learned in school. However, four seniors talked about professionalism throughout the interview when discussing school choice, school culture, and career development. The findings on professionalism were consistent and inconsistent with the study done by Casner-Lotto (2006). It was consistent in that she identified professionalism as one of the most important skills in the workplace. She also claimed that high school graduates are deficient in professionalism, which was contrary to the

researcher's finding. RVTH seniors recognized that they built professionalism in school, consistent with health services instructors who shared that they also emphasized professionalism in their teaching. The instructors explained that professionalism was a skill element that employers sought from job applicants and that instructors expected students to obtain in high school. Instructors gave examples of dressing professionally and having professional hygiene and appropriate piercings. Professionalism was also identified in lesson plans and the syllabus' daily grade and uniform sections; syllabi clearly detailed what was expected in uniform that included nursing scrubs, shoes, small piercings, hair, and short nails.

Three RVTH participants considered time-management skills as an important element they built from school. This was in conflict with the analysis of existing literature; studies did not specify time management in their findings, although time management can be considered a part of work ethic and professionalism. There were a few workplace skills demanded by employers but identified by only one student or none. Teamwork and responsibility were the skills mentioned by one participant, and critical thinking and problem solving were not discussed during the interviews. Sophie did mention responsibility in comparing herself with her friends, saying that she needed to be responsible for switching between academics and shop. This was not counted as a skill perceived important in the workplace and learned in school. Two out of four health services instructors said that responsibility was required in the workplace, and they expected students to develop it. One instructor said that teamwork was expected from students and that employees demanded critical thinking. Although teamwork and

responsibility were not directly identified by RVTH seniors, it is worth mentioning that students discussed some character qualities highly relevant to teamwork and responsibility. Students learned togetherness and how to help each other from the culture of shop family, and how to care for residents as CNAs. This implies that students learned qualities similar to teamwork and responsibility, the skills demanded in the workplace.

Despite the overwhelming acknowledgement of the significance of safety among instructors, students did not mention it in reflecting on their educational experiences. One of the instructors indicated handwashing as the most important skill in employment because “that’s the easiest way to avoid the spread of infection”—it is a skill often neglected in a hectic working environment. Another instructor emphasized “making sure you’re safe and your residents are safe.” The safety of CNAs was another forgotten aspect that needed attention: “Back injuries are more in health care than they are in major construction field,” said one instructor. It was believed that safety was invisible in the existing literature because of the lack of intra-industry research that particularly concerns skills needed in health care.

Despite a few incongruencies that might have been caused by lack of research and different definitions of the skills discussed, the findings of the current research on workplace skills were mostly consistent with the inter-industry literature that found the importance of certain skills, such as communication and professionalism.

Implication for Practice

The findings of the current study speak to the shared concerns of educators, employers, and policy leaders on how to better prepare students for the workplace and

what might be missing in the current system. Although a strong culture was present at RVTH, such culture was less present in the other settings, and the difference seemed to matter to students' educational experiences. The absence of competent culture in adult career-training programs might have come from the short duration of the programs. RVTH students spend three years in the same shop with the same teachers and classmates, building a family culture altogether, but most of the career-training programs for CNAs last less than two months, which may not give enough time to form any type of culture. In fact, short-term career-training programs for adults may not have to build the same kind of culture, considering the developmental stage of RVTH seniors and what is crucial when dealing with adolescents. Teen students can develop prosocial behavior if schools and classrooms promote the concepts of cooperation and connectedness (Carlo, Fabes, Laible, & Kupanoff, 1999). It might be reasonable to conclude that what RVTH students experienced is the kind of culture required for adolescent students to develop in similar high school settings. However, it might also be an example of our misperception that adults would not need any emotional support. Adult participants described their challenges in their educational experience, trying to balance their personal life, work, and schooling. While they suffered emotionally, it was a noteworthy finding that adult students rarely received any kind of emotional support while studying in the programs. Students might benefit from promoting meaningful relationships, and ensuring flexible makeup hours may lead to decreased absenteeism. Expressing the difficulty of scheduling makeup hours, Roxy also wished that the PN program had more laboratory practice time. Across cases and groups, adult students wanted more practice hours and clinical

experience. Dana, who obtained short-term training, also believed that students would benefit more by spending time in the field. Given the absence of professional culture, clinical experience can be utilized to provide more opportunities to build the students' emotional intelligence as an important aspect of character. In general, adult participants hardly discussed soft skill qualities, and this implies more soft skill building as demanded by employers. Requiring wearing nursing scrubs might be an example to help students build professionalism as well as to help create a program culture. It is believed that these improvements would ultimately lead students to better educational experience and preparation for what they would experience in the labor market.

The high school seniors were overwhelmingly content with their educational experiences at RVTH. Julia noted that she always had everything she needed at the technical school, and Maria said, "I honestly never felt like I needed something more." As witnessed from the unmet demand for vocational programs, Ariana recognized the need for educational opportunities available to more students, like the ones she was able to explore at RVTH. There were a couple of minor suggestions on shop choices, such as more guidance during the freshman shop selection process and more focus-interest shops, such as early childhood education and veterinarian technology. Participants also wished for more sports and school assemblies. In relation to the existing literature, RVTH and its students might benefit by building more skills like written communication, teamwork and responsibility.

As federal and state policies increase emphasis on academic achievement, vocational programs are also strengthening the rigor of academic curriculum. However,

such an academic approach is not sufficient to prepare students for the twenty-first century. The modern workforce requires more “employable” skills that encourage communication and professionalism. Some skills are particular to nursing students; for instance, CNAs need to have a precise communication skill and be aware of safety. Most importantly, it was found that family culture and the genuine relationships that students made with instructors were critical parts of students’ educational experiences. If vocational programs are committed to resolving the issue of skill mismatch and unmet demand, one recommendation for high schools in similar settings would be collaborating with regional vocational schools and learning how they develop such culture and character qualities. A longitudinal study on the effects of character education programs found that “copying and pasting” a program into a school’s existing culture is not likely to succeed (Seider, 2012, p. 220). Introducing three schools that developed their own curriculum that fit their mission and goals, Scott Seider (2012) said, “the choices made by school leaders and faculty about which character strengths to emphasize have profound effects upon their students’ belief, values, and actions” (p. 15). He suggests that schools must start by creating their own mission and goals and then seek out or develop their own curriculum (p. 222). There have been some attempts to replicate the RVTH model in comprehensive high school settings. While learning from RVTH should be encouraged, each school needs to first define what characterizes the school and its students to start a vocational program that is effective and reflects what is needed in the community.

To further understand how school culture is created, below are comparisons of mission statements of three comprehensive high schools adjacent to RVTH. School H’s

primary mission is “to develop the intellectual potential of each student” (Mission Statement, n.d.). School M’s mission is “to provide all students with a comprehensive education in a safe and inclusive environment” (Banach, n.d., para. 3). On the other hand, school N includes character qualities in its mission statement that school leaders and faculty wish their students to achieve: “N school strives to create an environment of learning, respect and tolerance that ensures all students set high standards, achieve academic success, and continue to learn and contribute to society” (Mission Statement, n.d., para. 1). RVTH’s mission statement shows its acknowledgement of human beings having multiple purposes in life while emphasizing high standards expected to its students: “We create a positive learning community that prepares students for personal and professional success in an internationally competitive society through a fusion of rigorous vocational, technical, and academic skills.” (School Profile Update, 2015, para. 1) In addition to a mission statement, each school details what kinds of skills are emphasized in their goals and objectives. Despite the high priority of academic achievement, school M promotes skills such as critical thinking, oral and written communication skills, and respect. School N also considers critical thinking, communication, teamwork, time management, and respect to be important parts of students’ education that would ultimately help them contribute to the society. Finally, in addition to enhancing skills such as communication and critical thinking, and character qualities such as self-esteem, leadership, and resilience, RVTH aims “to foster among staff a culture that embraces adaptability, reflection, mutual support, and ongoing professional development in the interest of continuous improvement” (2017–2018

Program of Studies, 2017). It is noteworthy that the school did not stop at defining what characterizes the school but moved a step forward by building its own culture based on the qualities valued by the school leaders and faculty.

Promoting a school culture should not be limited to a single school or community. Comer (2001) says, “to be successful, schools must create the conditions that make good development and learning possible: positive and powerful social and academic interactions between students and staff” (p. 33). It is an element that every school should have, and this left the researcher with an important question: How do we generate useful and understandable information that would ultimately improve the quality of public education? Ali, Flanagan, Pham, & Howard (2017) point out an issue that career development researchers currently have: “Researchers often lack the training and knowledge to work with federal and local agencies around workforce policy implementation and evaluation” (p. 228). They suggest translating research to inform policy and defining the contexts that come first. Students had positive educational experiences in a regional vocational technical school environment which allowed them to stay in the same shop for three years with the same teachers and peers. Within this context, RVTH seniors distinguished themselves from other participants by identifying school culture. Promoting school culture is a necessity when considering how RVTH students built various skills and personal qualities.

Although they may not be replicable, the researcher offers a few ideas to consider when initiating a school culture in similar settings. First, teachers should agree on what is valued in school and be of the same mind with the school’s mission statement. Second,

schools should encourage teachers' participation in ongoing conversations of what character qualities are emphasized in school. Third, a school curriculum should change and reflect its culture. For instance, a school might create a curriculum that promotes elements of communication and professionalism, and the weight of each element can differ depending on the shop and subject. Fourth, students need more time than we assume to learn skills that would help them succeed in the current labor market because such skills are not limited to technical skills; soft skills and personal qualities are also required to raise holistic human beings. Lastly, with genuine school culture and support, students are encouraged to build strong ties to teachers that would leave a deep and lasting impression in their career and life.

There are some technical aspects of RVTH that contributed to its culture that might appear easy to replicate, such as scheduling and facilities. Comer (2011), however, cautions against simple changes in infrastructure, curriculum, or service delivery because such reforms do not reflect the complexity of social and academic interactions that occurred in school. As demand for vocational technical programs increases, it is critical for policy makers to ensure high standards and requirements so that we do not sacrifice a high-quality education. Students deserve to be educated in an environment that allows them to obtain the skills needed for the labor market, not just the technical skills but character qualities and soft skills demanded by employers.

There is a distinction between instruction and education, with instruction referring to teaching the content-based skills that is in parallel with the academic approach, and education referring to the shaping of a human being (Glenn, 2014). While some schools

focus on increasing the skills and the ability to perform on a test, their students might be less educated in a holistic sense. In some schools, school culture is the foundation of education that helps students grow as a human being, as witnessed from RVTH seniors who identified numerous personal qualities and soft skills in their educational experiences. A culture established in a community cannot easily be replicated in another community as it is. However, it will not take a village to create or adjust an existing culture if there are systematic guidelines and requirements.

Limitations of the Study

The current study was a geographically constrained case study. People from similar geographies, with similar interests in a particular field, shared their opinions. Participants were moving toward a common goal; however, each case was different in how to navigate health career pathways which provided different educational experiences. The findings of this study were based on the case studies of twelve people, plus four instructors who provided information on workplace skills. Participants were recruited through convenience sampling, and it is possible that subjects who shared common traits and characteristics were overrepresented in the sample. Krathwohl and Smith (2005) state that those who volunteer to be interviewed are more likely to be different than nonvolunteers—they are usually better educated, higher in social status, and more sociable. The researcher acknowledges possible skewed results from limited, nonrandomized recruitment and does not generalize the results out of participant boundaries.

This study was a qualitative study about experience that can only be filled by

doing good qualitative work through interviewing, observing, and reviewing documents. The presence of the researcher during the observation might have changed the normal behavior of the instructor. It is also possible that interviewees remembered recent education experiences more clearly. The researcher attempted to minimize such shortcomings by comparing different data sources such as interviews, syllabi, lesson plans, and class materials. In the qualitative study, the researcher is the “instrument.” The expectations of the researcher may have influenced the data analysis in the direction that she hoped to see. To prevent such misinterpretation, the researcher utilized flashcards as an additional tool to write down codes as they emerged and used the frequency of each code to produce common themes. The use of various data sources also increased the overall quality of interpretation.

Future Research

This study provides directions for future research. Despite the findings on soft skills specifically needed in the health care industry, there are many more workplace skills that need to be examined in detail for those in healthcare career pathways. Future studies could benefit by recruiting more adult participants from various programs, especially the ones in community colleges, and by aiming to investigate various workplace skills. Similarly, future studies could examine other RVTHs that represent the culture of a good vocational education. The study focused on healthcare given its importance in the state. Future studies could replicate this study but examine different industries, such as advanced manufacturing and information technology, which are as important as healthcare in the state economy.

Conclusions

Educational experiences of students in this study showed some similarity with today's demand. A good vocational education explored through a regional vocational technical high school showed some cultural elements that might have influenced students to grow into high-quality workers with a lot of potential. Family culture, genuine instructor support, strict rules, and a clean learning environment were distinguished elements that were identified by RVTH seniors only. Participants from other vocational programs did not identify the same kinds of elements from their educational experiences. Regional vocational technical high school is not only altering the image of vocational technical education by example but is providing answers to the question of why more and more students and parents are demanding vocational education.

APPENDIX I: Interview Questions

High School Students

High school experience (vocational education)

- Tell me about your high school experience.
- Why did you choose this school? Was it your choice?
- Can you describe what you learned in high school, in general?
- What do you think about the school/ department policies (uniform, cell-phone use, etc.)?
- What kind of skills did you learn at RVTH?
- What was the most significant experience in high school?

Comparison to regular high schools

- Did you go to another high school before RVTH? [If so] can you compare your experience in two schools?
- Do you have friends in other schools? [If so] can you compare your experience with that of your friends?
- What do you especially like about RVTH?

Future plans

- Do you think your school experience helped you ready for the workplace?
- What kind of career goals do you have?
- Is there anything you wish your school had? What could be improved in your school?

Adult Participants

High school experience

- Where and when did you obtain your high school diploma?
- What do you remember about your high school experience?

- Why did you choose the high school you attended? Was it your choice?
- Can you describe what you learned in high school, in general?
- What was the most significant experience in high school?

Career training experience

- Can you describe what you learned in the training program?
- What kind of skills did you learn?
- What do you remember about the general culture/ atmospheres of the program?
- What was the most significant experience in the program?

Comparison to younger students

- Do you feel you needed more help in mathematics or English because you graduated from high school a long time ago?
- Can you compare yourself with those who just graduated from high school? Do you feel more mature and experienced?

Future plans

- Do you think your training experience helped you ready for the workplace?
- What kind of career goals do you have?
- Is there anything you wish the program had? What could be improved in the program?

APPENDIX II: Informed Consents

High School Students

Protocol Title: Research on Educational Experience in Career Technical Education
Principal Investigator: Chongmyung Park
Description of Subject Population: Students
Version Date: Aug 26, 2016

Assent Form

We are doing this study because we would like to learn more about educational experience in Career Technical Education. We are asking you join this study because you are a student in Certified Nurse Assisting (CNA) programs in Massachusetts.

If you decide to be in this study, we will interview you about your experience in CNA programs and skills learned in school. The interview will take about 30 minutes.

We will audio-record the interview session. This will help us to remember what we talked about in the session and help us to teach people how to do the interview sessions. We will protect the information provided by keeping the records in a password-protected computer.

You may get tired during the interview. You can rest at any time.

There are no benefits to you from taking part in this research. However, others may benefit in the future from the information that is learned in this study. It is expected that the study will inform about the elements of educational experience in CTE and show the ones directly related to the outcomes needed in the healthcare industry.

You will receive a \$10 Amazon gift card for participating in a 30-minute interview. You will receive the card after interview is completed. There are no costs to you for taking part in this research study.

We don't plan to tell anyone or share your name or other information about you if you join this study. However, there is a small chance that other people could find out your information. We will do our best to make sure that doesn't happen.

You do not have to take part in this research study. You can say 'Yes' or 'No'. You can say 'Yes' now and change your mind later. All you have to do is tell us you want to stop. Your parent or guardian can also decide to have you stop taking part in this study—that is OK too.

If you have any questions about this study, you can talk with me at any time.

Chongmyung Park, cmpark@bu.edu
Marcus Winters (Faculty Advisor), marcusw@bu.edu
I will give you a copy of this paper if you want.

Study Title: Research on Educational Experience in Career Technical Education
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Parents

Protocol Title: Research on Educational Experience in Career Technical Education
Principal Investigator: Chongmyung Park
Description of Subject Population: Students
Version Date: Aug 26, 2016

Please read this form carefully. The purpose of this form is to provide you with important information about taking part in a research study. If any of the statements or words in this form are unclear, please let us know. We would be happy to answer any questions.

If you have any questions about the research or any portion of this form, please ask us. Taking part in this research study is up to you. If your child decides to participate, we will give you a copy of the form.

The persons in charge of this study are Chongmyung Park (Principal Investigator) and Marcus Winters (Faculty Advisor). Chongmyung Park can be reached at cmpark@bu.edu, and Marcus Winters can be reached at marcusw@bu.edu. We will refer to these persons as the “researchers” throughout this form.

The purpose of this study is to examine the elements of educational experience in Career Technical Education (CTE), with particular attention to entry-level healthcare occupations in Massachusetts.

We are asking your child to take part in this study because he/she is a student in Certified Nurse Assistant (CNA) programs in Massachusetts. About 25 of subjects will take part in this research study.

If you choose to partake in the study, your child will be interviewed for about 30-minutes, which will be audio-recorded by the researcher. Participants will be asked about their educational experience in Career Technical Education and skills learned throughout the programs.

We would like to audio-record during the interview. If audio-recorded it will not be possible to identify your child in the record. We will store these recordings in a locked cabinet and only approved study staff will be able to see them. We will label these recordings with a code instead of your child’s name. The researcher will keep the key to the code in a password-protected computer, until the study is complete. Then the link will be destroyed.

We will keep the records of this study confidential by labeling them with codes and storing them in the researcher’s password-protected home computer. We will make every effort to keep the

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records confidential. However, there are times when federal or state law requires the disclosure of the records.

The following people or groups may review your study records for purposes such as quality control or safety:

- The Researcher and any member of her research team
- The Institutional Review Board at Boston University. The Institutional Review Board is a group of people who review human research studies for safety and protection of people who take part in the studies.
- Federal and state agencies that oversee or review research

The results of this research study may be published or used for teaching. We will not put identifiable information on data that are used for these purposes.

Taking part in this study is your choice. Your child is free not to take part or to withdraw at any time for any reason. No matter what you decide, there will be no penalty or loss of benefit to which you or your child are entitled. This will not affect your child's class standing or grades. Your child will not be offered or receive any special consideration if he/she takes part in this research study. If your child decides to withdraw from this study, the information already provided will be kept confidential.

Risks and Benefits

Your child may get tired during the tasks. He/she can rest at any time.

The main risk of allowing us to use and store your child's information for research is a potential loss of privacy. We will protect your child's privacy by labeling their information with a code and keeping the key to the code in a password-protected computer.

There are no benefits to you or your child from taking part in this research. However, others may benefit in the future from the information that is learned in this study. It is expected that the study will inform about the elements of educational experience in CTE and show the ones directly related to the outcomes needed in the healthcare industry.

Your child will receive a \$10 Amazon gift card for participating in a 30-minute interview. Your child will receive the card after interview is completed.

There are no costs to you or your child for taking part in this research study.

You can call us with any concerns or questions. If you DO NOT want your child to participate in this research study, please contact:

Chongmyung Park (student researcher) and Marcus Winters (Faculty Advisor). Chongmyung Park can be reached at (617) 866-7498 or cmpark@bu.edu. Marcus Winters can be reached at marcusw@bu.edu.

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If you have questions about your rights as a research subject or want to speak with someone independent of the research team, you may contact the Boston University IRB directly at 617-358-6115.

Statement of Consent

I have read the information in this consent form including risks and possible benefits. I have been given the chance to ask questions. My questions have been answered to my satisfaction, and I agree to participate in the study.

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Adult Participants

Protocol Title: Research on Educational Experience in Career Technical Education
Principal Investigator: Chongmyung Park
Description of Subject Population: Students
Version Date: Aug 26 , 2016

Information Sheet

The purpose of this research study is to examine the elements of educational experience in Career Technical Education (CTE), with particular attention to entry-level healthcare occupations in Massachusetts,

You are asked to partake in this study because you are a student in Certified Nurse Assistant (CNA) or Licensed Practical Nurse (LPN) programs in Massachusetts.

Your participation is voluntary. If you choose to partake in the study, you will be interviewed for about 30-minutes, which will be audio-recorded by the researcher. Alternatively, you may be asked to participate in a focus group if you are a LPN student at Blackstone Valley Regional Vocational Technical High School. The focus group will take approximately an hour and be audio-recorded by the researcher.

Any of your identification in field notes will be deleted or codified as soon as possible, and the documents will be stored in the researcher's home cabinet without any identifiable information. Interview and focus-group records will be electronically stored in the researcher's password-protected-home computer. By using a unique study ID assigned to you in the beginning, the researcher will not include any identifiable information in the following data collection procedures, data analysis, and any written reports.

Taking part in this study is your choice. You are free not to take part or to withdraw at any time for any reason. No matter what you decide, there will be no penalty or loss of benefit to which you are entitled. If you decide to withdraw from this study, the information that you have already provided will be kept confidential.

The following people or groups may review your study records for purposes such as quality control or safety:

- The Researcher and any member of her research team
- The Institutional Review Board at Boston University. The Institutional Review Board is a group of people who review human research studies for safety and protection of people who take part in the studies.

Study Title: <u>Research on Educational Experience in Career Technical Education</u>
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You may be uncomfortable with some of the questions and topics we will ask about. You do not have to answer any questions that make you feel uncomfortable.

The study does not have any evaluative component and what was discussed during interviews will not be shared with school authorities with any identifying information.

The main risk of allowing us to use and store your information for research is a potential loss of privacy. We will protect your privacy by labeling your information with a code and keeping the key to the code in a password-protected computer.

There are no direct benefits to you from taking part in this research. However, others may benefit in the future from the information that is learned in this study. It is expected that the study will inform about the elements of educational experience in CTE and show the ones directly related to the outcomes needed in the healthcare industry.

You will receive a \$10 Amazon gift card for participating in a 30-minute interview (or an-hour focus group). You will receive the card after interview/ focus group is completed.

The persons in charge of this study are Chongmyung Park (Student Researcher) and Marcus Winters (Faculty Advisor). Chongmyung Park can be reached at (617) 866-7498 or cmpark@bu.edu. Marcus Winters can be reached at marcusw@bu.edu.

If you have questions about your rights as a research subject or want to speak with someone independent of the research team, you may contact the Boston University IRB directly at 617-358-6115.

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CURRICULUM VITAE



