

Delaware Technical Community College TAACCCT Round 2 Grant Evaluation Final Report

Report to:
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EXECUTIVE SUMMARY

In September 2012, Delaware Technical Community College (DTCC) received a \$2.5 million Trade Adjustment Assistance Community College and Career Training (TAACCCT) Round 2 Grant through the U.S. Department of Labor (USDOL). DTCC, which is comprised of three campuses across the state of Delaware (Terry, Owens, and Stanton/George), used this funding for three activities: (a) to design a uniform nursing curriculum for the campuses offering a nursing program, (b) to create a Certified Nursing Assistant training course (HLH130), and (c) to redesign the Essentials of College Algebra (MAT140) course into an emporium format. Furthermore, while this project served all DTCC students enrolled in MAT140, HLH130, and the new nursing program, a focus of this grant is to provide TAA-eligible and veteran populations with guidance and assistance to complete training and credentials, allowing them to seek employment in a growing industry within the region.

The new nursing program was designed to unify the curriculum across campuses, as well as offer students a more hands-on approach to learning through a concept-based curriculum. The new program also gave students the opportunity to complete the program through an accelerated track. In addition, the program required students to be a Certified Nursing Assistant (CNA) or to have passed HLH130 prior to enrollment. MAT140 was designed to prepare students for college-level math. DTCC redesigned this course to offer an emporium format in which students learn through a combination of lecture and lab time.

The new courses and program implemented through TAACCCT Round 2 served students in several ways. First, HLH130 afforded nursing students the opportunity to earn a credential and work while enrolled in the nursing program. Second, the new nursing program allowed students to complete the program in less than 2 years, a benefit for students who wish to gain employment sooner. Third, MAT140 allowed students to progress at a pace that worked for them because in the emporium model, students work on activities, homework, and quizzes independently in a computer lab. While working in the lab, students can seek one-on-one assistance as needed through tutors available in the lab.

In April 2013, DTCC contracted Hezel Associates, LLC to conduct an external evaluation of the TAACCCT project for all four years of the grant. The goal of the evaluation was to provide formative and summative feedback on project implementation and outcomes to DTCC and the USDOL. Hezel Associates applied a theory-driven approach to the evaluation, emphasizing the links between project objectives, activities, and student participant outcomes. Specifically, Hezel Associates utilized mixed methods evaluation—using both quantitative and qualitative data collection and analysis procedures—to obtain data needed to meet the USDOL’s requirements and answer the evaluation questions related to DTCC project implementation and outcomes.

To evaluate project implementation, Hezel Associates researchers focused on the following six evaluation questions:

1. What is the level of implementation fidelity for the program by site, and across the program?
2. What program improvements were made during the implementation of TAACCCT Round 2?

3. How was the particular curriculum selected, used, or created?
4. How was the program managed and implemented?
 - 4.1. How were programs and program designs improved or expanded using grant funds?
 - 4.2. What delivery methods were offered?
 - 4.3. What was the program administrative structure?
 - 4.4. What support services and other services were offered?
5. Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?
 - 5.1. What assessment tools and processes were used?
 - 5.2. Who conducted the assessment?
 - 5.3. How were the assessment results used?
 - 5.4. Were the assessment results useful in determining the appropriate program and course sequence for participants?
 - 5.5. Was career guidance provided and if so, through what methods?
6. What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of (a) program design, (b) curriculum development, (c) recruitment, (d) training, (e) placement, (f) program management, (g) leveraging of resources, and (h) commitment to program sustainability?
 - 6.1. What factors contributed to partners' involvement or lack of involvement in the program?
 - 6.2. Which contributions from partners were most critical to the success of the grant program?
 - 6.3. Which contributions from partners had less of an impact?

To address each of these evaluation questions, Hezel Associates researchers administered student questionnaires to students enrolled in MAT140, HLH130, and the new nursing program; interviewed project staff and local industry partners involved in project activities; and reviewed programmatic documentation. Data from each collection source were analyzed separately, and then compared for consistent or conflicting findings. Student questionnaire data were analyzed with descriptive statistics (e.g., frequencies and percentages). Interview data were analyzed by parsing interview data into coded bits of content. The coded bits of data were then organized by themes and fitted to the conceptual framework. This process was continued until the data set was exhausted and the resulting set of concepts captured the full range of ideas from project staff and employer partners. Moreover, program documents were reviewed against a framework that outlined the project activities and milestones laid out in the DTCC project work plan.

In addition to project implementation, Hezel Associates also evaluated project outcomes. Hezel Associates researchers focused on the following evaluation questions to assess project outcomes:

7. How do outcomes compare between new accelerated program students and comparison groups, including: (a) new non-accelerated program students and (b) old program students?
 - 7.1. To what extent did the program increase the attainment of certifications, certificates, diplomas, and other industry recognized credentials?
 - 7.2. To what degree did the program curriculum improve learning outcomes and retention

rates for TAA-eligible workers and other adults?

7.3. To what extent did the program improve employment outcomes?

Hezel Associates researchers analyzed extant data for MAT140, HLH130, and new nursing program students in order to answer Evaluation Question 7 and the corresponding subquestions. The dataset also included data for students in non-emporium format MAT140, non-credit HLH130, and the old nursing program for comparison. Hezel Associates researchers created a randomly matched dataset for the nursing program data. Students were matched based on age and gender using STATA statistics software, more specifically the “ccmatch” function. Hezel Associates researchers did not match students based on age and gender for HLH130 data analysis because the discrepancy in the sample sizes between credit and non-credit HLH130 data would require elimination of many of the credit HLH130 cases (there were 1,493 credit HLH130 students and 278 non-credit HLH130 students). In addition, the gender ratio and average age of the emporium and non-emporium student data were similar so researchers included all cases in the analysis.

For each dataset (i.e., MAT140, HLH130, and the new nursing program), researchers ran chi-square tests to assess differences between groups. MAT140 students in the emporium format were compared to students in the non-emporium format; students in credit HLH130 were compared to students in non-credit HLH; students in the new nursing program were compared to students in the old nursing program; and students in the new accelerated program were compared to students in the new traditional program. In instances where there were violations of the assumptions required to conduct a chi-square test, Hezel Associates analyzed data with crosstabulations or descriptive statistics.

Based on findings from all quantitative and qualitative data collected through the 4-year grant, Hezel Associates has formed the following summaries and conclusions regarding the DTCC TAACCCT Round 2 project:

- The project was implemented with fidelity to the work plan. Though project implementation took place across four campuses, each campus successfully carried out project activities efficiently and successfully.
- Several programmatic improvements were made during implementation of the project. DTCC increased programmatic consistency among the campuses. Having consistency across campuses ensures students are receiving the same quality education no matter their location.
- Project staff worked collaboratively to select, use, and create curricula. Project staff from each campus and from different position levels (i.e., instructional designers, faculty, department chairs, and deans of instruction) formed project teams. The faculty developed curriculum design groups and made decisions based on majority ruling. Curriculum decisions were approved by department chairs and deans of instruction.
- The project had an effective program administrative structure. The TAACCCT Round 2 Project Director was organized, communicated well, and kept project activities on track.

Project teams worked collaboratively and met in person when possible. Having regular communication throughout the project allowed project teams to integrate input from each campus and develop uniformity in project implementation.

- TAACCCT Round 2 funds enabled DTCC to improve the new nursing program and MAT140, offer different program delivery methods, and provide support services to students. Grant funds provided DTCC the opportunity to increase space and update technology and equipment; redesign MAT140 into an emporium format and the new nursing program to a concept-based curriculum; offer accelerated options; and support students through tutors, faculty office hours, and other support services.
- In-depth assessments of participants' abilities, skills, and interests were conducted for students enrolling in the new nursing program. There is no in-depth assessment for students enrolling in MAT140; however, students are placed in the course through a placement exam, SAT scores, an advisor, transfer credits, or after passing an elementary math course. DTCC also has additional processes and assessments in place for all students regardless of the program, including credit for prior learning and experience through entrance exams, military and academic transcript reviews, and portfolio reviews with department chairs or other faculty.
- Local industry partners provided clinical sites and employment opportunities for students in HLH130 and the new nursing program. Project staff developed relationships with local facilities to establish clinical sites for HLH130 and new nursing program students. Through clinical experiences, students had the opportunity to gain hands-on work experience in the field and employers were able to assess strengths and weaknesses in technical and soft skills of potential new hires. Employer and clinical supervisors have been satisfied with the skills of the HLH130 and new nursing program students.
- Most HLH130 and new nursing program students passed the relevant certification/licensure exams when attempted. For instance, most students who took the CNA certification exam passed, though many HLH130 students did not take the exam. A vast majority of new nursing program students passed the NCLEX exam, which provides them licensure for nursing; however, there was not a statistically significant difference in pass rates compared to the old nursing program. In addition, new nursing program students in the accelerated format had significantly higher NCLEX pass rates than students in the traditional format.
- The new nursing program resulted in significantly higher program retention rates. Compared to the old nursing program, the new nursing program students had significantly higher program retention rates. Moreover, within the new nursing program, students in the accelerated program had significantly higher retention rates than students in the traditional program.
- Despite high unemployment rates at program exit, new nursing program students are confident they have gained various nursing competencies as a result of the program. Most nursing students who participated in the Nursing Exit Survey agreed that they had gained

the professional and technical skills needed for a career in nursing. Employers and clinical supervisors also indicated that DTCC HLH130 and new nursing program students demonstrate the competency level they are looking for in employees.

- The emporium format of MAT140 did not have a positive impact on course pass rates. Students in the non-emporium format had significantly higher MAT140 pass rates. This may be due to the structure of the course, which required students to be independent and self-motivated to keep up with course benchmarks. While the pass rates of students in the emporium model were not as successful as anticipated, students who did pass the courses tended to do well in additional college-level math courses.

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INTRODUCTION

Since 2009, the U.S. Department of Labor (USDOL) has awarded grant funds to community colleges and other institutions of higher education to develop or improve education and career training programs that can be completed in two years or less. These funds are granted through the Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program. In September of 2012, Delaware Technical Community College (DTCC) received a \$2.5 million TAACCCT Round 2 Grant through the USDOL. DTCC, which is comprised of three campuses across the state of Delaware (Terry, Owens, and Stanton/George), used this funding for three activities: (a) to design a uniform nursing curriculum for the campuses offering a nursing program, (b) to create a Nursing Assistant training course (HLH130), and (c) to redesign the Essentials of College Algebra (MAT140) course to an emporium format.

Through this grant, Trade Adjustment Assistance (TAA)-eligible individuals and veterans, among other learners, had the opportunity to enter into one of these programs, receive nationally recognized certifications through their course work, and complete certificate training. Ultimately, a focus of this grant was to provide TAA-eligible and veteran populations with guidance and assistance to complete training and credentials, allowing them to seek employment in a growing industry within the region.

In April 2013, DTCC contracted Hezel Associates, LLC to conduct an external evaluation of the TAACCCT project, including formative and summative evaluation of project implementation and outcomes. Hezel Associates has served as the external evaluator for all four years of the grant. In the first three years of the project, Hezel Associates provided *formative* feedback to DTCC to facilitate ongoing project improvement. Since this is the final year of the project, this final report provides *summative* feedback to DTCC project staff and USDOL on overall project implementation and outcomes.

Hezel Associates is pleased to share this final report which details the evaluation methodology and summative findings for all four years of TAACCCT Round 2. In this report, Hezel Associates aims to answer the following seven evaluation questions based on data collected and analyzed for the entire 4-year grant period:

1. What is the level of implementation fidelity for the program, by site, and across the program?
2. What program improvements were made during the implementation of TAACCCT Round 2?
3. How was the particular curriculum selected, used, or created?
4. How was the program managed and implemented?
 - 4.1. How were programs and program designs improved or expanded using grant funds?
 - 4.2. What delivery methods were offered?
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5. Did the grantees conduct an in-depth assessment of participants' abilities, skills, and interests to select participants into the grant program?
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6. What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of (a) program design, (b) curriculum development, (c) recruitment, (d) training, (e) placement, (f) program management, (g) leveraging of resources, and (h) commitment to program sustainability?
 - 6.1. What factors contributed to partners' involvement or lack of involvement in the program?
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7. How do outcomes compare between new accelerated program students and comparison groups including: (a) new non-accelerated program students and (b) old program students?
 - 7.1. To what extent did the program increase the attainment of certifications, certificates, diplomas, and other industry recognized credentials?
 - 7.2. To what degree did the program curriculum improve learning outcomes and retention rates for TAA-eligible workers and other adults?
 - 7.3. To what extent did the program improve employment outcomes?

For the purposes of this report, the TAACCCT Round 2 grant is referred to as the project or TAACCCT Round 2, activities are named as defined in the work plan (e.g., Strategy 1, Activity 1), and programs or courses refer to academic programs in which TAACCCT students are enrolled (e.g., nursing, MAT140, HLH130).

METHODS

Hezel Associates applied a theory-driven approach to the evaluation, emphasizing the link between project objectives, activities, and student participant outcomes. Specifically, Hezel Associates utilized mixed methods evaluation—using both quantitative and qualitative data collection and analysis procedures—to obtain data needed to meet USDOL's requirements and answer the evaluation questions related to DTCC project implementation and outcomes. The following sections describe the data collection—including instrumentation and study participants—and analysis methods used for the evaluation of TAACCCT Round 2.

Instrumentation

Hezel Associates researchers implemented several instruments throughout the duration of the grant in order to gather data pertaining to project implementation and outcomes. Instruments

used throughout the 4-year project are summarized in the following sections, with a greater emphasis on the most recent iteration of each instrument.

Document Review

Hezel Associates researchers developed the Document Review Framework to answer Evaluation Question 1, “What is the level of implementation fidelity for the program, by site, and across the program?” and to provide formative feedback to DTCC on project implementation progress throughout the grant cycle. The framework, based on the work plan designed by DTCC (see Appendix A), is an outline of specific milestones for DTCC project staff and Hezel Associates to follow in identifying appropriate documents for review. The Document Review Framework outlines three main project activities which are broken down into 43 milestones. The framework includes target dates for completion of milestones over the course of Years 1–3 of the grant (implementation was a focus of the project in these years). The Document Review Framework is included in Appendix B.

Staff In-depth Interview Protocols

With input from DTCC, Hezel Associates researchers created semi-structured interview protocols to guide conversations with project staff. The purpose of the interview protocols was to help researchers answer Evaluation Questions 2–7 and to provide formative feedback to project staff on project implementation and outcomes. The Staff In-depth Interview protocols were implemented in Years 1–4, varying slightly each year and focusing on different evaluation questions depending on the grant year. The interview protocol in Years 1 and 2 of the grant focused on four main areas: (a) governance and member roles; (b) communications and operations; (c) programs and recruiting; and (d) strengths, weaknesses, and the future of the project. In Year 3, the interview protocol included questions related to governance and member roles, program outcomes, and reflections. These instruments are described further in previous DTCC TAACCCT Round 2 evaluation reports.

The Staff In-depth Interview Protocol implemented in Year 4 contained the same questions as the Year 3 protocol, however, it included additional items pertaining to the sustainability of the program without TAACCCT funding, and the development of open educational resources (OER). The interview protocol contained 15 open-ended questions under three main topics: governance and member roles, program outcomes, and reflections. The open-ended questions were designed to obtain feedback from respondents regarding their perceptions of project implementation, improvements, and successes of TAACCCT Round 2. The interview protocol implemented in Year 4 is included in Appendix C.

Employer In-depth Interview Protocols

To assess employer and clinical supervisor perspectives on HLH130 and the new nursing program, Hezel Associates researchers developed a semi-structured interview protocol with input from DTCC project staff. The protocol served as a guide for conversations with employers and clinical supervisors who were involved in the project. The Employer In-depth Interview Protocol was intended to help researchers answer Evaluation Questions 2, 4, 6, and 7. The same version of the protocol was implemented in Years 3 and 4 of the project. The protocol contained nine open-ended questions under two main topics: background and experiences with participants. The open-ended questions were designed to obtain feedback from respondents regarding their (a)

relationship with DTCC, (b) contributions to TAACCCT Round 2, (c) perceptions of alignment of the curriculum to industry needs, (d) perceptions of the ideal employee or specific skills needed, and (e) thoughts on the progress of the grant. The Employer In-depth Interview Protocol is included in Appendix D.

Student Questionnaires

In collaboration with DTCC project staff, Hezel Associates developed four questionnaires to be administered to students in MAT140 and the new nursing program. The intent of the student questionnaires was to gather student feedback on their respective program and to address Evaluation Questions 4, 5, and 7. The student questionnaires are included in Appendix E.

Two student questionnaires were developed and implemented in Year 2: one geared toward students taking MAT140 and one geared toward students in the new nursing program. The MAT140 questionnaire contained 19 multiple choice items and 2 open-ended items. Questionnaire items focused on employment status, student support services, demographics, and opinions of the course. The new nursing program questionnaire was developed for nursing students in their initial program course, NUR170. This instrument contained 17 multiple choice items and 1 open-ended item. Items focused on demographics, employment status, student support services, and program opinions.

In Year 3, two additional questionnaires were developed. One questionnaire was developed for students in NUR190—a course similar to NUR170, but available to students with experience as a licensed practical nurse (LPN) or paramedic. The NUR190 questionnaire items focused on the same areas as NUR170, however there were 14 multiple choice items and 1 open-ended item. Moreover, an exit survey was developed for nursing students exiting the new program. This questionnaire contained 26 items regarding demographics, Certified Nursing Assistant (CNA) experience, opinions of the program, and future plans. All four student questionnaires were implemented in Years 3 and 4.

Study Participants

The evaluation of TAACCCT Round 2 included gathering information from DTCC project staff and faculty; local employers/clinical supervisors; and students enrolled in the new nursing program, HLH130, and MAT140. Each group of participants is described further in the following sections.

Project Staff and Faculty

Project staff and faculty are individuals at DTCC who contributed to the development and implementation of the project. The Project Director provided Hezel Associates with a list of staff and faculty who have participated in project activities (e.g., course design and development, instruction, clinical supervision, development of OER materials). Hezel Associates researchers recruited project staff from this list for participation in interviews in Years 1 through 4. To protect participants from respondent identification, responses were kept confidential and aggregated for all reports. Project staff participating in the evaluation activities did not receive any compensation nor benefits other than altruistic gains of providing feedback to strengthen the DTCC courses and program. Data collection activities involving project staff included informed consent procedures.

Industry Partners

The industry partners invited to participate in the TAACCCT Round 2 evaluation were individuals from local industry organizations that contributed to the implementation of HLH130 and the new nursing program. The industry partners included those who provided clinical sites for HLH130 and new nursing program students. They also included employers who have hired CNAs who completed HLH130 or nurses who graduated from the new nursing program. The Project Director provided Hezel Associates with a list of local employer and clinical supervisor contacts who participated in project activities. Hezel Associates researchers recruited employers/clinical supervisors from this list for participation in interviews in Years 3 and 4. To protect participants from respondent identification, responses were kept confidential and aggregated for all reports. Employers and clinical supervisors participating in the evaluation activities did not receive any compensation or benefits other than benefits that may be derived from TAACCCT Round 2 program improvements. All data collection activity involving employers and clinical supervisors included informed consent procedures.

Students

DTCC students from the new nursing program, for-credit HLH130, and MAT140 participated in TAACCCT Round 2 evaluation activities. These students participated by completing a questionnaire regarding their course or program. Student extant data pertaining to these groups of students were also obtained for the outcomes analysis. Moreover, students from the “old” nursing program (i.e., the program that existed prior to TAACCCT Round 2 funding), non-credit HLH130, and non-emporium MAT140 course, did not actively participate in data collection activities for the evaluation; however, extant data pertaining to these students were utilized as a comparison in the outcomes analysis.

All members of the new nursing program, for-credit HLH130, and MAT140 were invited to participate in the study in Years 2 through 4; those who consented to participation were asked to complete a questionnaire. All data collected were de-identified and reported in the aggregate, mitigating any risks associated with handling and storing information that includes personally identifiable data. There were no known substantial risks resulting from participation in the quantitative data collection activities contributing to this evaluation. Students were not compensated for their involvement in the evaluation.

Data Collection

Data collection activities were ongoing throughout the duration of the grant. Hezel Associates deployed qualitative and quantitative data collection methods to assess program implementation and outcomes. Data collection methods implemented throughout the grant are summarized in the following sections.

Document Review

DTCC project staff gathered and organized programmatic documentation from Years 1 through 3 demonstrating progress toward achieving TAACCCT Round 2 activities and milestones. DTCC project staff provided documentation to Hezel Associates researchers on a shared server space. Once documentation had been gathered, the Project Director provided Hezel Associates access to this shared server space for the purpose of reviewing these documents. DTCC project staff shared a total of 107 (64 in Year 2 and 43 in Year 3) documents for review, providing evidence

of progress made toward meeting project implementation activities and milestones in Years 1 through 3. Documents included meeting minutes and agendas, emails, the college-wide admissions handbook, approval letters, invoices, course catalogs and schedules, enrollment reports, course sequencing documents, instructor guides, and quarterly reports.

Staff In-depth Interview

In Years 1 through 4, Hezel Associates conducted in-depth interviews with the staff involved in TAACCCT Round 2 project activities, including faculty and staff involved with MAT140, HLH130, and the new nursing program. Each year, the Project Director provided Hezel Associates with a contact list of project staff. The individuals included in the contact lists mostly remained the same over the 4-year grant period, however, due to staff changes, several individuals were included in some years but not others. Once Hezel Associates obtained the contact list of staff willing to participate in the interview process, a Hezel Associates researcher sent a recruitment email to all potential respondents inviting them to participate in a 45-minute telephone interview. The researcher then sent a follow-up email to those who responded to the recruitment email, confirming a scheduled time, contact information, and providing informed consent information. A Hezel Associates researcher contacted the participant by phone at the scheduled date and time, confirmed consent to participate, and conducted the interview. Interviews were recorded with the permission of the participant and transcribed later for analysis. The researcher took notes by hand during the interview in instances where permission to record the interview was not granted.

The data collection methods remained consistent throughout each year, however, there were slight differences in the number of staff from each course/program participating in the interview process. Since data collection processes and response rates are detailed in previous reports, this report focuses on the number of individuals contacted and response rates for Year 4.

In Year 4, contact information for 25 staff members was provided to Hezel Associates—eight individuals contributed to MAT140, three to HLH130, and fourteen to the new nursing program. A recruitment email was sent to all 25 people. Sixteen individuals responded via email to the invitation, resulting in fifteen interviews conducted over three weeks in May through June of 2016. Seven of the staff interviewed were involved in MAT140, six were involved in the new nursing program, and two were involved in HLH130.

Employer In-depth Interview

In Years 3 and 4, Hezel Associates researchers conducted interviews with local industry partners, including employers and clinical supervisors who have been involved with HLH130 and the new nursing program. The interviews were implemented using the same processes each year, however, there were slight differences in the number of industry partners participating in an interview. Since data collection processes and response rates for Year 3 are described in the Year 3 report, this report focuses on the number of individuals contacted and response rates for Year 4.

In Year 4, the Project Director emailed a list of employers and clinical supervisors contributing to the implementation of TAACCCT Round 2 to Hezel Associates. The list included 32 individuals identified as potential respondents. A Hezel Associates researcher sent a recruitment

email to 30 potential respondents, inviting them to participate in a 30-minute interview; the remaining two individuals on the list were contacted by telephone. Four individuals had email addresses that were incorrect and researchers were unable to obtain the correct contact information. A reminder email was sent to 21 potential participants who did not reply to the initial invitation. Follow-up emails were sent to those who responded to the recruitment email, confirming contact information and a date and time, and providing informed consent information. A Hezel Associates researcher contacted the participant by phone at the scheduled date and time, confirmed consent to participate, and conducted the interview. Five individuals responded to the recruiting efforts, resulting in telephone interviews conducted with three participants. Two individuals scheduled interviews but did not respond to attempts to contact them at the time of the scheduled interview. Interviews were recorded with the permission of the respondent and transcribed later for analysis.

Student Questionnaire

The MAT140 and NUR170 student questionnaires were first administered in Year 2 using Remark survey software. A link to each questionnaire was provided to DTCC staff who then distributed it to students through Blackboard. Raw data were downloaded directly from Remark by Hezel Associates researchers in June 2014.

In Years 3 and 4, Hezel Associates re-administered these two questionnaires in addition to the newly developed NUR190 and nursing program exit questionnaires. The questionnaires were administered using QuestionPro survey software. A link to each questionnaire was provided to DTCC faculty who then distributed it to current students through Blackboard. Raw data were downloaded directly from QuestionPro by Hezel Associates researchers in May 2015 (Year 3) and May 2016 (Year 4).

Participant Data

TAACCCT Round 2 student participant extant data, such as demographics (e.g., date of birth, gender, race), special status (e.g., veteran, TAA-eligible), and program performance (e.g., credits received, completion), were made available to Hezel Associates researchers in Year 4. The Institutional Research office at DTCC shared these data with Hezel Associates through DTCC's secure online file-sharing system. Hezel Associates accessed and downloaded student extant data in August 2016.

The DTCC Institutional Research office also shared nursing program participant employment data with Hezel Associates in September 2016. DTCC staff made considerable efforts to obtain these data. In spring 2013, they began working with the Delaware Department of Labor (DEDOL) to access employment data; DTCC had a data sharing agreement in place with DEDOL that granted them access to aggregate data for students they requested. Later in fall 2013, DTCC staff received an aggregate report from DEDOL and concluded these reports were not sufficient for comparison purposes. They continued to work with the DEDOL into October 2015, at which point DEDOL provided DTCC access to Delaware Jobs Link (DJL), a database DEDOL uses to track workforce training initiatives and employment outcomes. Once DTCC received access to DJL, they began entering their TAACCCT Round 2 participants into the system.

The data from DJL allowed DTCC staff to track if the nursing program students were employed within the first, second, or third quarter after program exit. There are several limitations to these data, however. First, participant graduates must be employed for six months before their information is available in DJL. Second, employment is not limited to employment within a field of study; therefore, the data may show the participant as employed, but their job may not be related to their program of study. Third, to enter participants into DJL, DTCC staff must provide the participants' social security numbers; however, tracking social security numbers is not a requirement of DTCC so they were unable to obtain information for all students. Fourth, entering each individual participant into DJL was time consuming, taking upward of one hour per participant. Lastly, the system did not provide a way to determine wage increases for incumbent workers.

Data Analysis

Analysis of data pertaining to the TAACCCT Round 2 evaluation consisted of qualitative and quantitative methods, as detailed in the following section. Data from each collection source were analyzed separately, and then compared for consistent or conflicting findings. The synthesized findings from the analysis enabled Hezel Associates researchers to answer the evaluation questions.

Document Review

To address Evaluation Question 1, Hezel Associates indexed and assessed documents received in relation to the established framework. Hezel Associates researchers reviewed the documents provided against the Document Review Framework, making notes on what DTCC had done to justify completing each milestone under the Evidence column. In addition, researchers documented the date that that milestone was fulfilled and the status for meeting the milestones (marked as "Met," "Not Met," or "In Progress"). When the framework was completed, Hezel Associates researchers assessed how the project was implemented by assessing overall compliance with the milestones and deliverables according to the project timeline as proposed in the work plan. Documents from the first three years of the grant were analyzed in Years 2 and 3 to address Evaluation Question 1.

Employer and Staff In-depth Interviews

As all interview protocols for the evaluation were established prior to the beginning of data collection, researchers used a *preordinate scheme* to guide qualitative analysis. The preordinate scheme was established through the evaluation questions and semi-structured interview protocols. Hezel Associates researchers used annotated notes as the basis for the analysis. From the loose written transcriptions collected during the interviews, researchers applied an open coding approach (Strauss & Corbin, 1998). This method parsed lengthy discussions into bits of content, which were fitted to the conceptual framework established by the questions of interest. Each excerpted bit was tested against not only the construct of interest, but also against the accumulating narrative content associated with it, applying a condensed *constant comparative method* to isolate each construct and clarify how it was labeled or *coded* (Dey, 1993).

Researchers identified logical linkages among the named constructs. These patterns or *threads*, once identified, raised descriptions to low-level inferences in order to develop conclusions. This process was continued until the dataset was exhausted and the resulting set of concepts captured the full range of ideas from project staff and employer partners. Data from staff interviews were

specifically analyzed for concepts relating to Evaluation Questions 2 through 7 in all four years of the grant. Data from the employer interviews were analyzed for themes to address Evaluation Questions 2, 4, 6, and 7 in Years 3 and 4.

Student Questionnaire

Once student questionnaire data were downloaded, Hezel Associates researchers applied quality assurance checks to ensure data integrity. Researchers analyzed descriptive statistics, calculating frequency and percentage of responses. When possible, researchers compared and contrasted questionnaire data with qualitative data looking for patterns and disconfirming evidence, as well as to support findings and provide a comprehensive understanding of project activities. Student questionnaire data were analyzed in Years 2 through 4 to answer Evaluation Questions 4, 5, and 7.

Participant Data

Hezel Associates researchers analyzed extant data for MAT140, HLH130, and new nursing program students in order to answer Evaluation Question 7 and the corresponding subquestions. The dataset also included data for students in non-emporium format MAT140, non-credit HLH130, and the old nursing program for comparison. Once Hezel Associates researchers received the dataset from DTCC, they performed a series of data quality and integrity checks to ensure accuracy of findings.

For the MAT140 dataset, there were several duplicate cases of students because they took the course more than once. Hezel Associates researchers restructured the dataset so that each student was represented once and added a variable that indicated the number of times the student took the course. The gender ratio and average age of the emporium and non-emporium student data were similar so researchers included all cases in the analysis. Hezel Associates researchers conducted a chi-square test to assess differences in course pass rates between students in the emporium format and students in the non-emporium format. Descriptive statistics were calculated for all other analyses.

Hezel Associates researchers did not match students based on age and gender for HLH130 data analysis because the discrepancy in the sample sizes between credit and non-credit HLH130 data would require elimination of many of the credit HLH130 cases (there were 1,493 credit HLH130 students and 278 non-credit HLH130 students). To test for group differences, Hezel Associates researchers conducted a Fisher's exact test. Fisher's exact test is more appropriate than a chi-square test for this dataset because of the discrepant sample size—which leads to decreased power in detecting group differences.

For the nursing dataset, which contained data for new and old nursing program students, Hezel Associates researchers excluded cases of students who started the program as of 5/26/15 and 8/24/15 because they are not expected to have taken the NCLEX exam or completed the program, the two outcome variables of interest. Hezel Associates researcher took the remaining dataset and randomly matched students based on age and gender using STATA statistics software, more specifically the "ccmatch" function. The resultant dataset contained 582 matches, or 1,164 student cases. Using the matched dataset, researchers ran chi-square tests to assess differences between new and old nursing program students, and accelerated and traditional

program students. In instances where there was a violation assumptions necessary to conduct a chi-square test, Hezel Associates analyzed data with crosstabulations or descriptive statistics.

A data file containing employment data was also analyzed for the nursing program students. Outcome variables in the data file included whether the students were employed one, two, or three quarters after program exit. Hezel Associates researchers computed two new variables: employment status change from first quarter to second quarter, and employment status change from second quarter to third quarter. Frequencies were calculated for the analysis.

FINDINGS

Findings from all data collection and analysis activities conducted in Years 1 through 4 are included in this report to present a comprehensive description of current understandings of project implementation and outcomes. First, findings pertaining to implementation are presented, followed by a summary of project outcome findings.

Implementation

The following sections detail findings to answer each of the evaluation questions pertaining to project implementation. Overall, DTCC was successful in implementing the courses and program as outlined in the proposal to USDOL.

Evaluation Question 1

Hezel Associates addressed Evaluation Question 1, “What is the level of implementation fidelity for the program, by site, and across the program?” by analyzing program documentation according to the Document Review Framework. Hezel Associates collected and indexed project documentation for the first three years of the project which were largely focused on project implementation.

According to DTCC’s work plan, Strategy 1 was to accelerate student completion of courses in math. To achieve this strategy, DTCC planned to implement one emporium math course in addition to DTCC’s Developmental Emporium Math Program (implemented in TAACCCT Round 1). In Year 1, DTCC project staff began developing an emporium model for their existing MAT140 course, Essentials of College Algebra. To start, they formed a math curriculum committee and began curriculum development in the spring of 2013. By the end of that summer, staff had procured equipment and completed the layout of studio learning and classroom labs. Instructor guides were developed to facilitate MAT140 faculty training. A 16-week emporium and lecture model for MAT140 was implemented in the fall 2013 semester. The quarterly report showed that 343 students were enrolled that semester, exceeding the goal of 120 students. Overall, DTCC project staff met all milestones according to the timeline for Year 1 of Strategy 1.

The milestones outlined for Year 2 of Strategy 1 focused on administering end-of-semester assessments, continuing enrollment of students, and implementing an 8-week accelerated format of the course. Project staff were successful in administering end-of-semester assessments to the MAT140 students, which helped project staff and faculty gauge student satisfaction with the course. Moreover, the course catalog showed that 166 students were enrolled in the 16-week MAT140 class for the upcoming spring semester. Project staff were also successful in developing and implementing an accelerated, 8-week MAT140 emporium and lecture curriculum

for the fall 2013 semester. Project documentation showed 70 students enrolled, falling just 10 students short from the goal. Overall, project staff continued to make substantial progress in meeting milestones for Strategy 1 in Year 2; they nearly met all milestones within the timeline.

Year 3 milestones for Strategy 1 focused on continuing enrollment, administering end-of-semester assessments, expanding the emporium model to other math courses, comparing success/completion rates of students in the emporium and non-emporium formats, and analyzing persistence/retention rates. In Year 3, enrollment numbers were exceeded, student and faculty end of semester assessments were administered in both semesters, math faculty established a redesign team to investigate the feasibility to expand the emporium model, and staff completed persistence and retention analyses. There was no evidence demonstrating that project staff compared the success and retention of emporium and non-emporium students, however, staff began efforts toward meeting this milestone by coordinating with DTCC's Office of Institutional Research, the math department, and subject matter experts.

Overall, DTCC faculty and staff were successful in implementing the emporium format for MAT140 with fidelity to the proposed work plan. The course was developed as planned, with all of the program formats intended. The math faculty were also diligent in reviewing, revising, and assessing success, scaling opportunities, and capacity throughout the three years of implementation.

While Strategy 1 of the work plan focused on the development and implementation of MAT140, Strategy 2 pertained to activities regarding the new nursing program. Strategy 2 of the project was to accelerate student completion of nursing training, leading to acceptable industry credentials. This strategy comprised two main activities. Activity 1 focused on planning and implementation of the HLH130 course as a pre-requisite for admission to the new Nursing Associate Degree program. Activity 2 focused on planning and implementation of a unified, accelerated nursing training program with multiple entry and exit points along the pathway to an Associate in Applied Science.

In Year 1 of Activity 1, project staff met all milestones in accordance with the timeline. To start, they developed the HLH130 course and began recruiting faculty early in 2013. Project staff also obtained approval for the course from the institution and the Division of Long Term Care, the accrediting body for HLH130. Moreover, the program obtained two clinical affiliation agreements in order to offer students clinical experience in long-term care facilities. By the fall of 2013, the program expanded the lab space as evidenced by purchase orders from all three campuses. The provided documentation showed 233 students enrolled for the fall semester, exceeding the goal of 230 students.

The milestones for Year 2 of Activity 1 focused on increasing student enrollment in HLH130 and revising the curriculum as needed. Project documentation showed project staff were able to complete these milestones according to the timeline. Similar to the previous year, the number of students enrolled in HLH130 exceeded the goal of 460 (528 students enrolled). In addition, project staff were expected to review and revise the curriculum as needed. The project documentation included meeting minutes which demonstrated project staff met and discussed curriculum changes.

There were two milestones for Year 3 of Activity 1 which focused on continued student enrollment and curriculum revisions. These two milestones were both achieved within the proposed timeframe. Overall, Strategy 2, Activity 1—implementation of HLH130—was done with fidelity to the work plan. Over the course of the three years of program implementation, project staff were successful in implementing this activity with fidelity to the milestones and the timeline proposed. Faculty and staff surpassed milestones in the last stages of the implementation by exceeding enrollment goals and conducting the necessary review of curriculum.

In Year 1 of Activity 2, project staff met nine milestones within or close to the timeline. The first two milestones focused on standardizing admission requirements and aligning an accelerated nursing curriculum across the DTCC campuses. These milestones were completed by May 2013 as evidenced by a college-wide admissions handbook, a course sequence sheet, and class calendar for the accelerated curriculum. Next, project staff were successful in identifying standard pathways into and out of the program for CNAs, LPNs, and paramedics, creating a layout of the nursing program to demonstrate these pathways. The timeline also proposed that staff renegotiate articulation and transfer agreements as needed throughout 2013. While slightly delayed, provided meeting minutes showed discussion of these topics in March and June of 2014.

Moreover, in June 2013, staff achieved the fifth milestone in accordance with the timeline by obtaining approval for the college-wide curriculum from DTCC, Delaware Board of Nursing, and accreditation commission. Project staff also developed a plan for the use of Echo360, a software which allows faculty to record classroom lectures and events. They procured the necessary hardware and provided professional development to faculty for use of the program. In addition to Echo360 training, faculty also attended training on teaching in a concept-based curriculum. Lastly, to complete the final milestone, staff consulted with an external content expert for curriculum review. The expert provided a presentation of the curriculum review in March 2013.

In Year 2, project staff continued to meet all Activity 2 milestones according to the timeline. The first milestone (admit 90 students into the accelerated program) was exceeded; by the end of the grant year, 119 students enrolled in the program. Next, project staff developed and implemented a transition plan for switching from the traditional curriculum to the accelerated curriculum. Faculty were reassigned such that their expertise aligned with the new curriculum and they attended a professional development day in May 2014, meeting the third and fourth milestones, respectively. Lastly, staff marketed the new program and promoted the changes to prospective students and other stakeholders.

Finally, Year 3 of Activity 2 focused on implementing the unified, accelerated nurse training program. DTCC faculty and staff attended professional development opportunities, marketed the new accelerated program, conducted a review of curriculum for any necessary revision, exceeded enrollment numbers, and successfully exited the first cohort of students in the new accelerated program. Overall, the accelerated nursing program was implemented with fidelity throughout the grant period.

Overall, TAACCCT Round 2 was implemented with fidelity to the work plan. The work plan and other information included in the Technical Proposal to USDOL were a central focus throughout implementation of the project. There was little deviation from the intended plan over the three-year implementation period. Regardless of a slow start, the implementation of TAACCCT Round 2 was done with fidelity, efficiency, and organization.

Evaluation Question 2

Evaluation Question 2 asks, “What program improvements were made during the implementation of TAACCCT Round 2?” To answer this question, Hezel Associates researchers referred to data from staff and employer interviews. Researchers focused on emerging themes across all grant activities to highlight improvements to the programs, as well as for DTCC overall.

One major improvement of the curricula for MAT140, HLH130, and the new nursing program is the consistency across campuses. Consistency was integrated not only in new curricula, but also for expectations of students and teaching styles across campuses. Prior to the grant, math students could choose their MAT140 course section based on which instructor they preferred; however, the uniform curriculum has standardized the instruction and difficulty of the course, resulting in more consistency in teachers’ instruction across campuses. One project staff commented, “going into [the project], the three nursing programs were very different” but “with the grant we aligned to have one curriculum.” According to project staff, the uniform curriculum was good for the college; “it was a difficult process to go through, but being the only community college in the state, it makes sense.”

Moreover, HLH130 was seen as a benefit to students and an improvement at DTCC. HLH130 offers students the opportunity to earn a stacked credential that can be used to continue on to a degree program or find employment as a CNA. Through HLH130, students can “get a certification and employment and then work towards an associate’s or a bachelor’s degree.” Given that HLH130 or CNA certification serve as pre-requisites for the nursing program, students do not require the same level of fundamental instruction when they start the nursing program because they already have the basic knowledge and skills. Faculty have discovered that students “are doing way better in the first nursing class than in [the] old program.”

Changes in curriculum as a result of TAACCCT Round 2 required faculty and students to adjust to new formats and styles. The new emporium style math made students more responsible for their learning, and therefore challenged faculty to adjust their methods, ensuring the success of their students. This new style required faculty to “change the way they thought about teaching.” The nursing curriculum was also a big change for faculty and students. The new concept-based model “refreshes the program and gives [faculty] a new outlook.” Other staff indicated this

process was exciting because “the grant forced us [faculty] to think differently” and that faculty and staff were “fortunate to think outside of the box when we developed something new.” The new curricula provided opportunities for faculty to evaluate current practices and enhance their instructional techniques.

Additionally, employers and clinical supervisors shared their perspectives on nursing program improvements. They indicated that they have seen improvements in student or graduate performance. For example, DTCC students and graduates are comfortable with the basic skills, such as taking blood pressure or bed side manner. DTCC students are more hands on and willing to assist rather than standing by and watching during their clinical. This overall opinion may be the result of the required CNA, leading to students that have some previous experience or knowledge which helps them overcome initial barriers, such as timidity or unfamiliarity with processes and environments.

Based on project staff and employer interview findings, several important improvements were made to MAT140 and the new nursing program as a result of TAACCCT Round 2. The grant facilitated alignment of curricula across the DTCC campuses and revision of teaching and learning methods. Nursing students have the option to earn a stackable CNA credential and have demonstrated increased confidence in the nursing setting. Project staff continued to make improvements to the courses and program throughout the grant, incorporating feedback from students and faculty. Project staff also reviewed student data, such as pass rates, to determine if additional changes were needed to improve student success.

Evaluation Question 3

In order to answer Evaluation Question 3, “How was the particular curriculum selected, used, or created?”, Hezel Associates researchers analyzed data from staff interviews. The findings presented in this section are based on themes that emerged from analysis of staff interview data from all four years of the grant. First, findings that are similar across the MAT140 and new nursing program are presented. The following portions of the findings discuss the specific themes that emerged exclusively within MAT140 and the new nursing program, respectively.

For both MAT140 and the new nursing program, DTCC formed curriculum design groups to develop and implement curricula. Each group was similarly structured. The department chairs from each campus selected department faculty members to engage in the design groups. All DTCC campuses offer MAT140, resulting in a group comprised of four department chairs and four faculty members. Two of the faculty involved in the MAT140 design group previously participated in the design of MAT015, an emporium math course implemented in TAACCCT Round 1, so they were familiar with the process of implementing the emporium format. Moreover, three of the four DTCC campus locations offer the nursing program; a department chair from each of the three campuses participated in the project and identified four faculty members from each of their respective campuses to comprise the curriculum design group.

The design groups convened regularly to discuss the curriculum and program design. They aimed to achieve a consensus when making any decisions; “We voted as a group, so the majority would rule.” In the event that the group needed additional input to make a decision, they brought questions or designed materials to the department chairs. Curriculum design was also brought to

the department chairs for approval. Once the department chairs approved the work, it then moved on to the Deans of Instruction for final approval. Once the Deans of Instruction granted approval, the MAT140 design group implemented the new emporium style course. The new nursing program required additional approval by the Accreditation Commission for Education in Nursing (ACEN) prior to implementation.

MAT140

The design group began working on the redesign of MAT140 into the emporium format in the spring 2013 semester and continued throughout the summer. Their work involved selecting course materials (e.g., textbook, software), revamping the syllabus, determining the pace of the course, and designing tests. The design group conferred with the department chairs for feedback and input when necessary. Once a draft of the curriculum redesign was completed, the group gained approval from the department chairs, however, the curriculum also required approval by the Deans of Instruction before it could be implemented by the faculty for the fall semester of the 2013-2014 academic year. This approval is where the group began to experience some difficulty.

The Deans of Instruction wanted the MAT140 design to match the standards of the previously implemented emporium style developmental math courses, which engaged students in more self-directed learning. The design group developed a course design that was more rigorous than the developmental courses, incorporating more structure to MAT140 because it was intended to be a transition course from developmental math to college-level math. They felt the course should prepare students for the rigor of higher level math courses. The design group was left with a week to integrate the changes requested by the Deans of Instruction in order to have the class ready for the 2013-2014 school year. The design group indicated “it was a panic to make the changes.” Though staff were able to make the changes in time, they noted that receiving feedback sooner, or throughout the design process, would have been beneficial.

Many of the faculty in the design group were also MAT140 instructors, “which worked well” according to staff because faculty teaching the course are more “in tune” with its successes and limitations. After MAT140 was implemented, the design group continued to meet periodically to revise it as needed for improvement. Staff reviewed course pass rates and discussed ways to improve delivery to increase pass rates. Only minor changes were made; for example, revisions of policy, course delivery, and student expectations were implemented to improve the success of students. Decisions regarding course changes required consensus from all campuses.

A requirement of the TAACCCT grant is that curriculum materials be open to the public. To satisfy this requirement, the design group developed or selected existing materials to be included as OER. Similar to the classroom curriculum, the department chairs reviewed the OER materials and granted approval.

Nursing Program

The nursing program design group consisted of 12 members from the three DTCC campuses offering the program. Despite some staff turnover, the group maintained a balanced group of four faculty per campus. The design group used a combination of face-to-face meetings and video conferencing while working on the unified nursing curriculum for DTCC. Group members were

familiar with the current best practices put out by the ACEN, which drove the decision to move towards a concept-based curriculum.

Developing the new concept-based curriculum involved not only changes to the curriculum content, but also how the concepts were taught. Having a concept-based curriculum involves a more practical, hands-on learning approach, rather than the traditional lecture format. The design group was pleased with the decision to implement a concept-based curriculum because "...it better addresses how to develop the nurses of the future to be better thinkers—to collaborate with other healthcare professionals. We have research to support that these new ways of developing nurses are beneficial."

As the design group worked towards creating a unified curriculum, there was difficulty in determining the duration of the program. Group members involved with the ACEN indicated that a six-semester program may not get approved by the ACEN due to the length. Though members of the group voiced their opinions against six semesters, they were directed by higher level administration to proceed with designing a six-semester program. In the spring 2013 semester, the design group sought approval for their curriculum design from the Deans of Instruction and ACEN; however, difficulty arose for the group. "We had designed a syllabus, and we thought as the committee it was approved by the deans, so we assumed that we could move forward. But it came back to us at a later date, saying it wasn't approved and it needed to be redesigned." Additionally, they received notice that summer from the ACEN requesting that they reduce the duration of the program from six semesters to five. This was a point of frustration for the group, especially those who advocated for a shorter program. Over the summer, individuals who were not part of the nursing curriculum design group redesigned a portion of the program to incorporate the suggested changes. Many in the original design group were unaware of the changes that were being made until they came back for the start of the fall semester.

The new curriculum was implemented as of January 2014. The design group continued to meet periodically to discuss how the courses were going and what needed to be revised. Only minor revisions were made such as refinement of content and course delivery. The design group worked towards having a logical flow of skills taught in the CNA course (HLH130) and fundamental courses such as NUR170 and NUR190, through more advanced courses, and to the end of the program. Additionally, project staff tracked students who entered the program and assessed what factors were contributing to the success or failure of the students. Using this information, the design group made decisions on revisions needed to improve the program.

Similar to the MAT140 design group, the nursing program staff contributed to the development of OER materials, creating voice-overs and videotaped lectures for inclusion on the learning platform Echo360. Moreover, nursing program staff provided recommendations to the Project Director for subject matter experts (SMEs). A SME was selected to review curriculum materials and speak with the program faculty.

Overall, DTCC project staff formed design groups to select, create, and oversee implementation of MAT140 and new nursing program curricula. The design groups included faculty representation from each campus in which the respective program was delivered. Decisions were made as a group, using a majority rules method, with input from department chairs in times of

disagreement. Curricula design and decisions were initially sent to the department chairs for approval, then to the deans of instruction, and a substantive change request was submitted to the ACEN. Once curricula were implemented, the design groups continued to meet to review factors, such as pass rates, to inform programmatic improvements.

Evaluation Question 4

In order to answer the fourth evaluation question, “How was the program managed and implemented?”, Hezel Associates analyzed data from staff and employer interviews, as well as the student questionnaire. Findings from the analysis of each of these data sources were synthesized to answer the four evaluation sub-questions, presented below. Altogether these findings address the overarching evaluation question.

Evaluation Question 4.1 asks, “How were programs and program design improved or expanded using grant funds?” The TAACCCT grant provided both MAT140 and new nursing program project staff with funding to redesign curricula, expand lab space, and improve technology within their departments. Project staff from MAT140 and the new nursing program felt there were sufficient funds available for what they needed and requests for spending were typically met.

Grant funding provided the DTCC math department the ability to (a) redesign MAT140 into the emporium format and (b) expand their computer lab space. This redesign of the curriculum provided DTCC the opportunity to ensure that instructors provide the same instruction to students across the four campuses. In addition, funding provided math department staff the opportunity to hire tutors and expand the Math Success Centers (previously implemented through the TAACCCT Round 1 grant) at each campus. These centers were designed to provide one-on-one support to students from instructors and tutors working in the centers. Faculty felt that having this one-on-one support for the students was beneficial because it allowed them to ask for help without drawing attention to themselves.

MAT140 has a redesign team that explored the feasibility of scaling up the emporium model to other math courses. Though the emporium model was felt to be beneficial for MAT140 students, project staff reported they did not scale up the emporium model to higher level math courses. They indicated higher level math requires more instructor involvement so the emporium model does not work as well; however, they have used the emporium format in other developmental level math courses. Moreover, MAT140 project staff indicated the math department is revamping their course offerings and MAT140 will not be offered in the future. The content covered in this course will be spread across other math courses within the department.

For the new nursing program, nursing faculty used grant funds to make changes to admission requirements and redesign the curriculum. Changes to admission criteria included the new requirement that all program students complete HLH130 or be a CNA prior to being enrolled in the nursing program. This requirement allowed students to gain exposure to the nursing profession without the full-time commitment of being a nursing student. The benefit is that students acquire CNA skills and can be employed while going through the nursing program. Furthermore, grant funds were used to redesign the curriculum to be concept-based, update equipment, and expand lab space for HLH130 and other nursing courses.

While the nursing program was a pre-existing program at DTCC, the curricula offered through this program was not unified across the campuses. DTCC used the redesign of the nursing program as an opportunity to align the nursing program curriculum offered at each of the campuses. Alignment of the new nursing program curriculum across campuses allowed students to continue where they left off if they needed to move to a different area during their program.

Local nursing industry partners had a positive response when asked about HLH130 and the new nursing program curriculum. They indicated HLH130 was beneficial because it taught nursing students the basics and exposed them to the field. The students are provided with hands-on experience and the content taught aligns with what they are looking for in an employee. Project staff indicated they will continue to offer HLH130 and the new nursing program after the grant ends. The program will be sustained through DTCC; curriculum updates and maintenance will be funded through the colleges' existing operating budgets. The college has already been supportive in hiring adjuncts and providing other support when needed.

Overall, TAACCCT Round 2 funds enabled project staff to make improvements to MAT140 and the nursing program. Project staff were able to expand their space, updated equipment, and revise curricula. While the new nursing program and HLH130 will continue to be offered at DTCC and sustained through the college's operating budget, MAT140 will no longer be offered as a result of an overall math department redesign.

TAACCCT funding provided MAT140 and new nursing program staff the opportunity to redesign their courses, which led to new delivery formats. This is the focus of Evaluation Question 4.2, "What delivery methods were offered?"

With the new emporium format, MAT140 students still had lecture time—typically in a computer lab—when teachers went over the material to be covered, but the in-class lecture time was reduced to allow for students to have the opportunity to complete coursework in the Math Success Centers. At these centers, students can watch videos of how to do specific problems; engage in practice problems; and complete homework assignments, quizzes, or tests. Students were asked through the Student Questionnaire to indicate what percentage of their time was spent in lecture and the Math Success Center. The results are included in Table 1 and indicate that the students continued to spend more time in lecture than in the centers.

Table 1. MAT140 Percentage of Time Spent in Lecture vs. Math Success Center

Percent of Time		Year 2 (n = 135)		Year 3 (n = 211)		Year 4 (n = 33)	
Lecture	Math Success Center	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0-24%	75-100%	21	15.6	38	18.0	6	18.2
25-49%	51-74%	17	12.6	24	11.4	5	15.2
50%	50%	22	16.3	35	16.6	5	15.2
51-74%	25-49%	23	17.0	28	13.3	7	21.2
75-100%	0-24%	52	38.5	86	40.8	10	30.3

Furthermore, the MAT140 course was offered in various lengths—8, 10, 12, or 16 weeks. The Student Questionnaire asked students to indicate their course length. The findings show that most students were enrolled in the 16-week course (see Table 2). These data align with interview data

indicating that the 8-week format was not as popular as anticipated; some of those sections were cancelled due to low enrollment. Most students reported being able to keep up with the pace of the course, regardless of course length.

Table 2. Student Enrollment by Duration of MAT140

Course Length	Year 2 (n = 138)		Year 3 (n = 212)		Year 4 (n = 40)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
8 weeks	5	3.6	7	3.3	2	5.0
10 weeks	1	0.7	4	1.9	1	2.5
12 weeks	19	13.8	19	9.0	14	35.0
16 weeks	113	81.9	182	85.8	23	57.5

Moreover, the new nursing program offered an accelerated format which allowed students to complete the program within 18 months, as opposed to the traditional format which spans 24 months. In order to complete the accelerated program, students who enter into the program “go straight through the summer—which is a strength” according to staff. However, nursing faculty and staff reported that the accelerated program works well for students who do not have many obligations outside of their academics, such as family. The nursing exit survey included items to gauge students’ perceptions of this new accelerated model. Table 3 denotes the findings from these survey items.

Table 3. Nursing Program Students’ Perceptions of the Accelerated Model

Survey Item	Year 3 (n = 11)		Year 4 (n = 38)	
	Frequency	Percentage	Frequency	Percentage
<i>The pace of the accelerated program was...</i>				
Comfortable	7	63.6	30	78.9
Too fast	3	27.3	5	13.2
Unsure	1	9.1	3	7.9
<i>Was the accelerated program beneficial to you?</i>				
Yes	8	72.7	34	89.5
No	3	27.3	2	5.3
Unsure	0	-	2	5.3
<i>Did the accelerated program meet your expectations?</i>				
Yes	6	54.5	30	78.9
No	4	36.4	3	7.9
Unsure	1	9.1	5	13.2
<i>If given the choice again, would you choose the accelerated option rather than the traditional program?</i>				
Yes	8	72.7	33	86.8
No	1	9.1	3	7.9
Unsure	2	18.2	2	5.3

The data suggest that most of the survey respondents felt the pace of the accelerated program was comfortable and that the accelerated model was beneficial to them. Most indicated they would choose the accelerated program again over a traditional program. A higher percentage of students in Year 4 felt the accelerated program met their expectations than students in Year 3; these data align with feedback from nursing staff who indicated that in Year 4, they better

emphasized expectations of the accelerated model to interested applicants.

New nursing program classes were taught through face-to-face instruction because the concept-based curriculum involves mostly hands-on work throughout the program. HLH130 and the new nursing program also included clinical experiences for students; according to staff, “[DTCC is] pre-licensure so many of the hours are clinical, in a clinical facility, taking care of patients.” In addition to hands-on experience, students also had the opportunity to create lectures and other supplemental materials online through Echo360. The Nursing Exit Survey asked students to indicate whether they used Echo360 during their program and if so, whether it was beneficial. Tables 4 and 5 denote the findings from Years 3 and 4.

Table 4. Nursing Program Students’ Use of Echo360

Did you utilize Echo360 (Lecture Capture) while enrolled in the nursing program?	Year 3 (n = 11)		Year 4 (n = 67)	
	Frequency	Percentage	Frequency	Percentage
Yes	8	72.7	31	46.3
No	2	18.2	35	52.2
Do not know	1	9.1	1	1.5

Table 5. Nursing Program Students’ Perceptions of Echo360

Was Echo360 beneficial during your time in the program?	Year 3 (n = 8)		Year 4 (n = 29)	
	Frequency	Percentage	Frequency	Percentage
Yes	4	50.0	23	79.3
No	4	50.0	6	20.7

The percentage of students using Echo360 in Year 3 was higher than in Year 4, however, the small sample size in Year 3 may affect interpretation of these findings. Though only about half of the survey respondents used Echo360 in Year 4, most of them felt it was beneficial to them during their time in the program.

Overall, there were new delivery methods offered through TAACCCT Round 2. Students had the opportunity to complete MAT140 in the emporium format, which enabled students to work at their own pace. In addition, students had the option to take the course in a timeline that works for them. Moreover, the nursing program also offered an accelerated model which allow students to complete the program in a shorter timeframe. While most of the curriculum was in class or in clinical, students had access to online resources through Echo360.

Evaluation Question 4.3 asks, “What was the program administrative structure?” At the highest level, the Project Director oversees the MAT140, HLH130, and nursing project activities while managing TAACCCT Round 2. According to staff and faculty interviews, there were some problems with the project leadership at the start of the grant so DTCC hired a new Project Director for TAACCCT Round 2 in January 2014. During interviews, most project staff had positive feedback about the new leadership; “the whole process picked up again and we moved forward in a very productive way.” Staff and faculty noted the Project Director had good communication and organization, kept staff on track, and handled issues with a calm demeanor.

Faculty and staff from the math and nursing departments were responsible for implementing project activities at their respective campus. In particular, project implementation was overseen

by the Deans of Instruction and Department Chairs of the Math and Nursing departments at each campus. Any decisions made typically went to the deans and chairs for final approval. Project staff also deferred to the department chairs at times when there was difficulty in reaching a group consensus.

Four nursing faculty from each of the three campuses (12 total) offering the nursing program were selected by their department chairs to develop the new concept-based curriculum. The math curriculum committee consisted of one faculty member from each campus and an instructional designer. The HLH130 working group comprised one lead faculty member from each of three campuses. Department chairs from math and nursing at each campus were responsible for overseeing progress of the committees and the deans of instruction had final approval.

Curriculum committees, or design groups, used various meeting strategies during the development process. Meetings varied in frequency as the development process progressed, but often faculty met in person. Face-to-face meetings required time commitment and travel because the campuses are located across the state. When in-person meetings were not possible, teleconferences were scheduled. The math department chairs had regularly scheduled weekly conference calls that were utilized for TAACCCT Round 2 discussions related to progress or issues. In support of face-to-face meetings and teleconferences, committee members shared information via email and Blackboard. Using Blackboard worked well for faculty because they could easily organize documents and resources, and they were all familiar with the online platform.

Moreover, there were faculty participating in project implementation by serving as course instructors and lead teachers, and performing other lead roles. Some of the faculty contributing to the implementation of HLH130 and the new nursing program served as instructional coordinators, overseeing the day-to-day operations of the courses, as well as clinical coordinators, managing clinical site relationships and arranging student clinicals.

With the time commitments for participation in project implementation, including research, development, and travel times, faculty received support from DTCC to handle the work load. Some faculty were given release time from teaching in order to dedicate more of their time to curriculum development. Some faculty members were given reduced course loads to allow for more time to spend on TAACCCT Round 2 activities. Faculty also received stipends to compensate for traveling expenses when attending meetings in person.

In general, project activities for MAT140, HLH130, and the new nursing program were carried out with a similar administrative structure. Staff were pleased with the leadership from the Project Director hired as of January 2014. The curriculum design groups had representation from different staff levels—deans, chairs, and faculty—and from all relevant campuses. Project teams met in person when feasible and otherwise communicated via phone, email, and Blackboard. Project staff reported that as a result of collaborating with other DTCC campuses for TAACCCT Round 2, the campuses are more unified.

Through DTCC, TAACCCT students in MAT140 and the nursing program had access to support services, which is the focus of Evaluation Question 4.4; “What support services and other services were offered?” To answer this question, Hezel Associates researchers referred to data from the student questionnaires. Survey participants were asked to indicate which support services were available to them for their course, and which of those services they used.

For MAT140, students had the opportunity to utilize the Math Success Center, Success Center tutors, a Drop-in Tutoring Center, and instructor office hours for support. Project staff used TAACCCT funding to hire the tutors. The majority of respondents were aware of all the available services (see Table 6), suggesting faculty made substantial efforts to inform students of the resources available to them. Overall, other than the Math Success Center, which was likely a requirement of the course, the students did not utilize the support services much (see Table 7).

Table 6. MAT140 Student Awareness of Support Services

Services Available	Year 2 (n = 127)		Year 3 (n = 199)		Year 4 (n = 28)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Success Center Tutors	118	92.9	182	91.5	23	82.1
Math Success Center	112	88.2	173	86.9	27	96.4
Instructor Office Hours	107	84.3	176	88.4	22	78.6
Drop-in Tutoring Center	99	78.0	168	84.4	22	78.6

Table 7. MAT140 Support Services Used

Services Used	Year 2 (n = 115)		Year 3 (n = 129)		Year 4 (n = 19)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Success Center Tutors	67	58.3	50	38.8	18	94.7
Math Success Center	110	95.7	123	95.3	6	31.6
Instructor Office Hours	28	24.3	30	23.3	4	21.1
Drop-in Tutoring Center	32	27.8	24	18.6	8	42.1

Nursing students had access to the following support services while taking their courses: supplemental instruction, tutoring, math review, faculty office hours, and nursing retention instructors. TAACCCT funding allowed DTCC to hire faculty through the summer for advisement, office hours, and tutoring. The NUR170 and NUR190 student questionnaires asked the students enrolled in these courses to indicate which support services they were aware of and which they used during their course. The findings are presented in Tables 8–11.

Table 8. NUR170 Student Awareness of Support Services

Services Available	Year 2 (n = 53)		Year 3 (n = 177)		Year 4 (n = 148)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Supplemental Instruction	47	88.7	108	61.0	91	61.5
Tutoring Center	43	81.1	148	83.6	132	89.2
Math Review	37	69.8	151	85.3	124	83.8
Nursing Retention Instructor	34	64.2	128	72.3	105	70.9
Faculty Office Hours	23	43.4	157	88.7	129	87.2

Table 9. NUR170 Support Services Used

Services Used	Year 2 (n = 34)		Year 3 (n = 89)		Year 4 (n = 67)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Supplemental Instruction	19	55.9	45	50.6	38	56.7
Tutoring Center	11	32.4	18	20.2	9	13.4
Math Review	9	26.5	27	30.3	13	19.4
Nursing Retention Instructor	6	17.6	30	33.7	16	23.9
Faculty Office Hours	14	41.2	50	56.2	41	61.2

The majority of NUR170 student survey respondents were aware of the support services available to them, except for faculty office hours in Year 2. Their awareness of this service increased in the following years. While most students were aware of the support services available to them, not all services were frequently used. Consistently, less than half the respondents reported using the tutoring center, math review, or the nursing retention instructors. Survey respondents typically utilized the supplemental instruction and faculty office hours for support.

Table 10 indicates that in Year 3, NUR190 student survey respondents were most aware of support through math review and faculty office hours. Only half were aware of the tutoring center and nursing retention instructors, and less than half were aware of supplemental instruction. In Year 4, all respondents were aware of the support services available to them, except faculty office hours. It is important to note that the small sample size of NUR190 students in Years 3 and 4 may affect interpretation of findings.

Table 10. NUR190 Student Awareness of Support Services^a

Services Available	Year 3 (n = 18)		Year 4 (n = 3)	
	Frequency	Percentage	Frequency	Percentage
Supplemental Instruction	7	38.9	3	100.0
Tutoring Center	9	50.0	3	100.0
Math Review	13	72.2	3	100.0
Nursing Retention Instructor	9	50.0	3	100.0
Faculty Office Hours	13	72.2	2	66.7

^a The NUR190 Survey was administered to students in Years 3 and 4 only.

In Year 3, survey respondents in NUR190 mostly utilized the nursing retention instructors and faculty office hours (see Table 11). Less than half of the respondents used supplemental instruction, the tutoring center, or math review. In Year 4, only one respondent reporting using faculty office hours.

Table 11. NUR190 Support Services Used^a

Services Used	Year 3 (n = 14)		Year 4 (n = 1)	
	Frequency	Percentage	Frequency	Percentage
Supplemental Instruction	5	35.7	0	-
Tutoring Center	2	14.3	0	-
Math Review	4	28.6	0	-
Nursing Retention Instructor	9	64.3	0	-
Faculty Office Hours	12	85.7	1	100.0

^a The NUR190 Survey was administered to students in Years 3 and 4 only.

Overall, MAT140 and new nursing program students had access to support services for their course. Both the math and nursing students had access to tutors and faculty office hours. MAT140 students primarily used the Math Success Center and the tutors available there. This aligns with the emporium model of the course which encourages students to spend more time in the centers. Moreover, NUR170 and NUR190 students most often utilized faculty office hours; many NUR170 students also used supplemental instruction for support.

Evaluation Question 5

Hezel Associates researchers analyzed qualitative staff interview data and quantitative student questionnaire data in order to address Evaluation Question 5, “Did the grantees conduct an in-depth assessment of participants’ abilities, skills, and interests to select participants into the grant program?” and the associated sub-questions: “What assessment tools and processes were used?”; “Who conducted the assessment?”; “How were the assessment results used?”; “Were the assessment results useful in determining the appropriate program and course sequence for participants?”; and “Was career guidance provided and if so, through what methods?” In addition, the Nursing Program Admission Handbook 2014-2015 was reviewed by Hezel Associates researchers in order to supplement data collected from faculty and students.

MAT140 serves as a bridge between developmental and college-level math; students enrolled in MAT140 were placed in this course after completing remedial math, Elementary Algebra (MAT015), or due to an assessment of their prior learning. At least half the MAT140 respondents who had not taken the prerequisite algebra course were enrolled in MAT140 because of a college placement exam, as presented in Table 12. While transcript reviews and advisement are used to assess prior learning, exam scores were the most common assessment of students' math abilities.

Table 12. Reasons for Placement in MAT140

Reason	Year 2 (n = 42)		Year 3 (n = 88)		Year 4 (n = 15)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
College placement exam	21	50.0	50	56.8	9	60.0
SAT scores	12	28.6	12	13.6	0	-
College advisor	5	11.9	13	14.8	2	13.3
Credit from another institution	3	7.1	4	4.5	1	6.7
Passed MAT015	1	2.4	2	2.3	1	6.7
Do not know	0	-	7	8.0	2	13.3

Moreover, the nursing program is an over-subscribed program, meaning more students are interested in this program than spots available. Due to this interest, all three DTCC campuses have a ranked admissions process to define who will be accepted into each cohort. Applicants are admitted to the nursing program based on their calculated score, which depends on entrance exam scores, Delaware residency, clinical math background, and anatomy and physiology background. Specifically, applicants receive between 2 to 6 points for scores on the National League for Nursing pre-entrance exam based on results ranging from 50 to 99 (on a 0-99 scale). Applicants can receive two points for maintaining Delaware residency. Between two and four points are awarded to applicants based on the grade earned in an applied clinical math course of a "C" or better. Similarly, applicants can earn between two and four points for grades earned in anatomy and physiology. Aside from the requirements with program admission points, applicants must also provide a high school transcript and achieve an academic standing of 2.0 or higher.

Points are assigned for the four criteria and are added together for each applicant; those total scores are ranked in the admissions process. Applicants with the highest scores are admitted once a year, therefore applications are compared to a different group of individuals in each review. This competitive admissions process is now uniform across the three nursing campuses; two campuses introduced this process as part of TAACCCT Round 2. Given the nature of the work that will be performed once students have graduated, passed the licensure exam, and have been hired, DTCC staff also conducts "a background check and drug testing" for potential candidates. In addition, admitted students seeking advanced placement can earn credit for prior learning following the standard procedures established by DTCC and the nursing department.

Both MAT140 and the nursing program have specific processes for determining a students' placement. However, DTCC also has additional processes and assessments in place for all students regardless of the program. Students may receive credit for prior learning and experience through entrance exams, military and academic transcript reviews, and portfolio reviews with department chairs or faculty.

Evaluation Question 6

Evaluation Question 6 asks, "What contributions did each of the partners (employers, workforce system, other training providers and educators, philanthropic organizations, and others as applicable) make in terms of (a) program design, (b) curriculum development, (c) recruitment, (d) training, (e) placement, (f) program management, (g) leveraging of resources, and (h) commitment to program sustainability?" To address this evaluation question and the corresponding sub-questions, Hezel Associates researchers assessed data from the staff and employer interviews. Since MAT140 serves as a bridge to college-level math courses, rather than a certificate or degree, the findings do not apply to this course. Industry partners were utilized in the implementation of HLH130 and the new nursing program.

Employer partners working with HLH130 and nursing students included staff nurses, nurse managers, clinical supervisors, and administrators. During the clinical rotations, students worked with staff nurses and nurse managers taking care of patients in a variety of environments. The administrators are often responsible for placement, performance review, and hiring. Through the clinical experience, nursing students can gain on-the-job training necessary to be successful in the workplace. The clinical rotations also give the employer partners a chance to provide feedback and assess the students' strengths and weaknesses in technical skills and communication to make the decision whether they could be a potential new hire. In some cases, the clinical rotation almost serves as an audition for employment. In the assessment of strengths and weaknesses, employers are looking for individuals with certain skills, such as the ability to communicate with patients, family, and staff; critical thinking; clinical decision making; and the ability to do a thorough assessment of a patient using all of their senses. In addition, employer partners indicated they look for employees with certain personality characteristics, such as being caring, flexible, and able to manage priorities; keeping good attendance; working in a team; and handling a large case load.

Having the concept-based curriculum and clinical rotations were critical to the success of the program (Evaluation Question 6.1). Employer partners indicated that the DTCC HLH130 and nursing students typically have the skills and characteristics they are looking for in a CNA or nurse. The students tend to be professional, well-rounded, and with a "real sense of what to expect in nursing." Importantly, HLH130 and nursing students are not afraid to ask questions or put their hands on a patient.

Evaluation Question 6.2 asks, "What factors contributed to partners' involvement or lack of involvement in the program?" Employer partners are encouraged to establish relationships with DTCC because in return, they can hire capable graduates. The relationship between DTCC and employers becomes reciprocal if DTCC can send students for clinical experience and the employer potentially establishes a feeder system for new hires. Nursing staff can identify the students they enjoy working with and who excel on the job. However, some employers reported

there is a transition occurring in the field, requiring a bachelor's for hiring a Registered Nurse (RN), the same position DTCC nursing program graduates are typically eligible for. The shift to this new requirement is forcing employers to only consider new hires with an associate's degree if they can promise to finish the second degree quickly. DTCC has five articulation agreements with colleges and universities, which are beneficial for nurses with an associate's degree looking to further their education.

In the case of DTCC's nursing students, employer partners can potentially see the effects of changes to the program. As mentioned above, the nursing students are hands on in the clinical and comfortable performing basic skills, often stepping in to help out instead of observing. While many employer partners are very complimentary of DTCC's program and their graduating students, some partners, by the very nature of their roles in their organization, were not privy to DTCC's curriculum changes. This lack of awareness indicates that partners had less of an impact on the curriculum design (Evaluation Question 6.3). Communication between DTCC and employer partners could have been improved, as one respondent indicated "I feel that there could be more collaboration between the hospital and DTCC."

Overall, employer partners had positive opinions of the TAACCCT Round 2 nursing program and HLH130; "...top notch school, top notch nursing programs. The instructors are great. The students are great." Two suggestions were made to improve the program. First, students should have more practice with administration skills (e.g., using IVs and needles). "There's a fear of a needle and having to do it on somebody else." Having more practice would help students gain more confidence with these tasks. Second, for the HLH130 course, "there needs to be more support and direction from DTCC's vantage point as far as getting them scheduled for testing." The CNA certification test is not a requirement of HLH130. Employers see a benefit to becoming a CNA because it enables students to "get some real life experience in health care right away."

Outcomes

Evaluation Question 7 asks, "How do outcomes compare between new accelerated program students and comparison groups including (a) new non-accelerated program students and (b) old program students?" This evaluation question focuses on outcomes for the nursing program; however, Hezel Associates researchers also assessed outcomes for HLH130 and MAT140. To understand TAACCCT Round 2 outcomes, Hezel Associates primarily analyzed student participant extant data; however, researchers also analyzed staff and employer interviews and student questionnaire data for anecdotal, supplemental findings. First, findings on outcomes of HLH130 and the new nursing program are presented, followed by findings on MAT140 outcomes.

HLH130 and New Nursing Program Outcomes

Evaluation Question 7 consists of three subquestions. Evaluation Question 7.1 asks, "To what extent did the program increase the attainment of certifications, certificates, diplomas, and other industry recognized credentials?" For HLH130, students who took the course were prepared for the CNA certification exam; however, they are not required to take this test as part of the course. To answer Evaluation Question 7.1, Hezel Associates researchers compared CNA certification exam pass rates for students in credit HLH130 to pass rates of students in non-credit HLH130.

Prior to comparative analysis, Hezel researchers examined the similarity of the two groups. The extant data set contained 1,493 students in credit HLH130 and 278 students in non-credit HLH130. Since the groups were compared based on CNA certification test pass rates, researchers analyzed data only for students who took the test. In the HLH130 dataset, 72 (4.8%) students who were enrolled in credit HLH130 took the CNA certification test and 37 non-credit HLH130 students (13.3%) took the test. This is consistent with data from staff and employer interviews which indicated many students did not take the test, as it was not a requirement for the course. Of those who took the test, the mean age of students who were enrolled in credit HLH130 ($M = 28.97$, $SD = 9.313$) was similar to the mean age of students in non-credit HLH130 ($M = 31.46$, $SD = 12.043$). The median age of the two groups was the same ($Mdn = 26$). The female to male ratio was also similar between groups; the credit HLH130 group was 80.6% female and 19.4% male; the non-credit HLH130 group was 83.3% female and 16.7% male.

Table 13 displays the pass rates for students in credit and non-credit HLH130. For both groups, the majority of students taking the certification exam passed. This finding is consistent with staff interview feedback. Project staff indicated that HLH130 students that did take the test typically passed. Some students did not attempt the exam until several months after the course; project staff have noticed that students who waited tended to not do as well on the exam.

Table 13. Pass Rates of Students Who Took Credit HLH130 vs. Non-credit HLH130

Outcome	Credit HLH130 (n = 72)		Non-credit HLH130 (n = 37)	
	Frequency	Percentage	Frequency	Percentage
Pass	59	81.9	31	83.8
Fail	13	18.1	6	16.2

Given the discrepancy in sample sizes, researchers used Fisher's exact test to examine if there was a statistically significant difference between the two dichotomous variables (i.e., Group—credit HLH130 or non-credit HLH130, and Outcome—pass or fail). The results indicated there was not a significant difference between the pass rates of the credit group and the non-credit group ($p = 1.000$, Fisher's exact test).

To answer Evaluation Question 7.1 with regard to the new nursing program, Hezel Associates researchers analyzed program completion and NCLEX pass rates. First, researchers compared these data points for students in the new nursing program to students in the old nursing program. A matched participant dataset was used for the comparative analysis; students were matched on age and gender. There were 1,164 total cases (582 students in the new nursing program, and 582 in the old nursing program). The mean age of both groups was the same ($M = 33.44$, $SD = 8.669$) as well as the median ($Mdn = 31$).

First, a chi-square was conducted to determine if new and old nursing program students differed in NCLEX pass rates. The crosstabulation is presented in Table 14. Results indicated that students in the new and old nursing program did not significantly differ in their NCLEX pass rates, $\chi^2(1, N = 627) = 0.06$, $p = .809$.

Table 14. Comparison of NCLEX Pass Rates for Students in the New and Old Nursing Program

Outcome	New Nursing Program (n = 281)		Old Nursing Program (n = 346)	
	Frequency	Percentage	Frequency	Percentage
Pass	273	97.2	335	96.8
Fail	8	2.8	11	3.2

Next, Hezel Associates researchers conducted a chi-square test to determine if new and old nursing program students differed in program completion rates. The crosstabulation is presented in Table 15. Results indicated that students in the new and old nursing program significantly differed in their program completion rates, $\chi^2 (1, N = 1,164) = 55.25, p < .001$. Students in the old nursing program had significantly higher program completion rates. Prior to analysis, Hezel Associates researchers eliminated cases of students who started the program after May 2015 as they would typically still be enrolled in the program; however, 88.5% of the remaining cases are new nursing program students that were enrolled part-time, and therefore may still be enrolled. This may impact the interpretation of the chi-square results.

Table 15. Comparison of Program Completion Rates for Students in the New and Old Nursing Program

Outcome	New Nursing Program (n = 582)		Old Nursing Program (n = 582)	
	Frequency	Percentage	Frequency	Percentage
Complete	332	57.0	451	77.5
Incomplete	250	43.0	131	22.5

Moreover, Hezel Associates researchers compared program completion and NCLEX pass rates of new nursing program students in the accelerated and traditional models. A dataset that contained matched participants based on age and gender was used for the comparative analysis. There were 354 total cases (177 students in the accelerated program and 177 in the traditional program). The mean age of both groups was the same ($M = 30.16, SD = 7.620$) as well as the median ($Mdn = 28$).

A chi-square test was not conducted to determine if accelerated and traditional format nursing program students differed in NCLEX pass rates because the assumptions for this statistic were not met; there were too few students in two of the crosstabulation cells (each cell must contain five or more cases). Therefore, only the crosstabulation is presented (Table 16). Based on the crosstabulation, students in the accelerated program had higher NCLEX pass rates (97.8%) than students in the traditional program (59.7%).

Table 16. Comparison of NCLEX Pass Rates for Students in the Accelerated and Traditional Nursing Program

Outcome	Accelerated (n = 134)		Traditional (n = 61)	
	Frequency	Percentage	Frequency	Percentage
Pass	131	97.8	60	59.7
Fail	3	2.2	1	1.3

Next, Hezel Associates researchers conducted a chi-square test to determine if accelerated and traditional nursing program students differed in program completion rates. The crosstabulation is presented in Table 17. Results indicated that students in the accelerated and traditional nursing programs significantly differed in their program completion rates, $\chi^2 (1, N = 354) = 92.50, p < .001$. Students in the accelerated nursing program had significantly higher program completion rates. Similar to the new and old program comparison, Hezel Associates researchers eliminated cases of students who started the program after May 2015 to exclude students who are likely to still be enrolled in the program; however, 85.9% of the traditional program students and 83.1% of accelerated program students were enrolled part-time, which may affect the interpretation of these findings.

Table 17. Comparison of Program Completion Rates for Students in the Accelerated and Traditional Nursing Program

Outcome	Accelerated (n = 177)		Traditional (n = 177)	
	Frequency	Percentage	Frequency	Percentage
Complete	159	89.8	73	41.2
Incomplete	18	10.2	104	58.8

Hezel Associates researchers explored program completion and NCLEX pass rates for TAA-eligible students as well; however, all TAA-eligible students in the dataset were from the new nursing program; therefore, comparisons were explored between accelerated and traditional program students only. Chi-square tests were not conducted for program completion and NCLEX pass rates of TAA-eligible students because the data violated the assumption that each cell have an expected count less than 5. Therefore, descriptive statistics are presented only in Table 18. All TAA-eligible students in the accelerated and traditional nursing program who took the NCLEX exam passed. The majority of these students completed the program.

Table 18. Program Outcomes for TAA-eligible Students in the Accelerated and Traditional Nursing Program

Outcome	Accelerated (n = 23)		Traditional (n = 30)	
	Frequency	Percentage	Frequency	Percentage
NCLEX pass	21	100.0	19	100.0
NCLEX fail	0	-	0	-
Program complete	21	91.3	21	70.0
Program incomplete	2	8.7	9	30.0

Hezel Associates researchers also cross referenced findings from the extant data with findings from the staff interviews and Nursing Exit Survey. While the extant data showed NCLEX pass rates were slightly higher for students in the new nursing program (97.2%) than the old nursing program (96.8%) for DTCC students overall, project staff from each campus had differing opinions about pass rates. Project staff from one campus noted there was no difference in NCLEX pass rates since the new program, one campus reported a decline in pass rates, and the other campus reported an increase in pass rates. Moreover, the percentage of students passing the NCLEX exam aligns with students' perceptions of their ability to pass the exam (Figure 1).

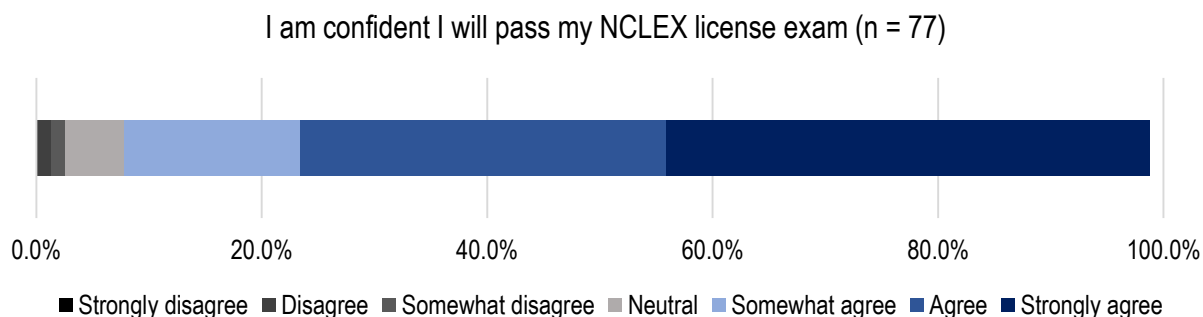


Figure 1. Nursing Students' Perceptions of Their Ability to Pass the NCLEX Exam

Note. Data are based on nursing students' responses on the Nursing Exit Survey in Years 3 and 4. One respondent selected "Do Not Know" which is not represented in this figure.

Overall, the new nursing program did not significantly increase the number of students earning a certification or degree. Most students who took HLH130 did not take the CNA certification exam, but students that did tended to pass, earning a credential as a CNA. In addition, most students in the new nursing program passed the NCLEX exam; there was an increase in pass rates from the old program, however the increase was not statistically significant. Within the new nursing program, students in the accelerated program had higher NCLEX pass rates than students in the traditional program, however the difference was not statistically significant. Moreover, of the 53 TAA-eligible students in the dataset, all passed the NCLEX exam regardless of program length (i.e., accelerated or traditional).

To answer Evaluation Question 7.2, "To what degree did the program curriculum improve learning outcomes and retention rates for TAA-eligible workers and other adults?" Hezel Associates researchers examined extant data for HLH130 and the new nursing program. Data regarding TAA-eligible workers are presented for the new nursing program only as TAA-eligibility data were not available in the HLH130 dataset.

For HLH130, Hezel Associate researchers analyzed course grades as a measure of learning outcomes; however, since non-credit students did not receive course grades, these data are presented for the credit HLH130 group only. In addition, since HLH130 is a course and not a full program, retention data were not applicable. Of the 1,493 students who were included in the credit HLH130 data, 96.3% completed the course. This supports claims from project staff who indicated through interviews that HLH130 is a pre-requisite course for the new nursing program and many students who took HLH130 continued on to the program. The majority (96.3%) of the students who took HLH130, passed the course with a "C" or higher.

To assess retention outcomes of the new nursing program, Hezel Associates researchers conducted a chi-square test to determine if new and old nursing program students differed in retention rates. Students classified as "retained" remained in the program after their first year. The crosstabulation is presented in Table 19. Results indicated that students in the new and old nursing program significantly differed in their retention rates, $\chi^2(1, N = 1.164) = 40.61, p < .001$. Students in the new nursing program have significantly higher program retention rates.

Table 19. Comparison of Retention Rates for Students in the New and Old Nursing Program

Outcome	New Nursing Program (n = 582)		Old Nursing Program (n = 582)	
	Frequency	Percentage	Frequency	Percentage
Retained	492	84.5	400	68.7
Not retained	90	15.5	182	31.3

A chi-square test was also conducted to determine if accelerated and traditional nursing program students differed in retention rates. The crosstabulation is presented in Table 20. Results indicated that students in the new and old nursing program significantly differed in their retention rates, $\chi^2 (1, N = 354) = 18.74, p < .001$. Students in the accelerated program have significantly higher program retention rates.

Table 20. Comparison of Retention Rates for Students in the Accelerated and Traditional Nursing Program

Outcome	Accelerated (n = 177)		Traditional (n = 177)	
	Frequency	Percentage	Frequency	Percentage
Retained	172	97.2	148	83.6
Not retained	5	2.8	29	16.4

For TAA-eligible students, a chi-square could not be calculated to assess differences between the students in the accelerated and traditional program because the assumption of the minimum number of students in each cell was not met. Therefore, Hezel Associates calculated frequencies to report these data. Of the 53 TAA-eligible students in the dataset, 30 were in the traditional program and 23 were in the accelerated program. Ninety percent of TAA-eligible students in the traditional program were retained after their first year; all 23 TAA-eligible students in the accelerated program were retained after their first year.

To assess learning outcomes for students in the new nursing program, Hezel Associates researchers referred to data from the Nursing Exit Survey. Data from Years 3 and 4 were combined and reported in the following figures, which represent students' perceptions of learning competencies gained through the new nursing program. There were no TAA-eligible students who participated in the Nursing Exit Survey; therefore, TAA-eligible student perceptions on learning outcomes cannot be reported.

Figure 2 indicates students' perceptions on the benefits of taking HLH130 or being a CNA prior to enrolling in the new nursing program. Most (83.1%) students who took HLH130 agreed to some extent that the course prepared them for the nursing program. In addition, the majority (78.0%) of students who did not take HLH130, but were CNAs prior to enrolling, were glad they were a CNA prior to enrollment; they felt it was beneficial to have work experience as a CNA prior to enrolling (70.0%).

Please indicate the degree to which you agree or disagree with the following statements

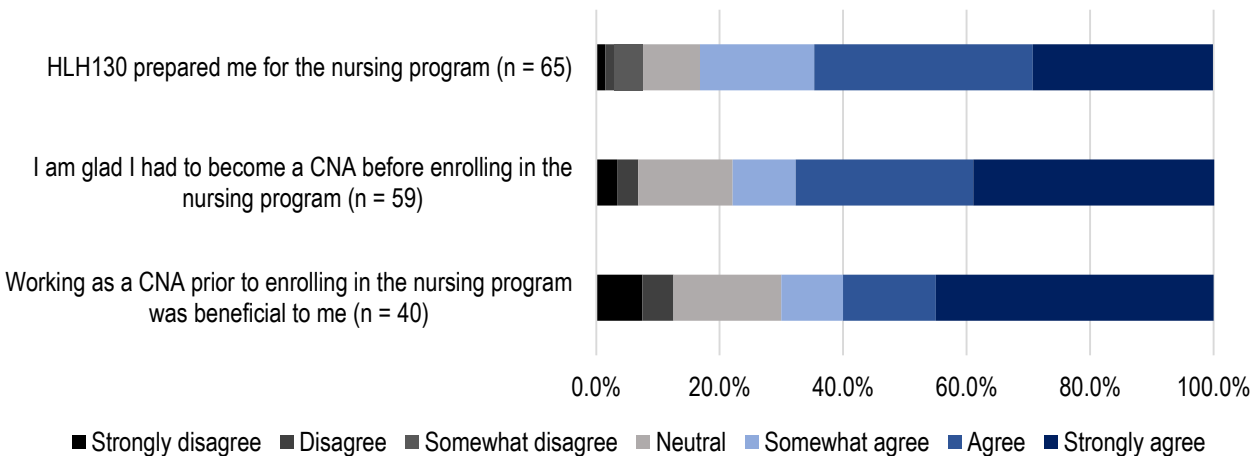


Figure 2. Nursing Students' Perceptions of the Benefits of HLH130 or Being a CNA Prior to the New Nursing Program

Note. Students who responded "Does not apply" are not included in the frequency percentages.

In addition, students were asked to indicate the extent to which they agreed they gained certain graduate (Figure 3) and core (Figure 4) competencies as a result of the new nursing program. Nearly all respondents agreed or strongly agreed that they gained the program graduate competencies, which include areas such as using theoretical knowledge and clinical reasoning skills, maintaining caring relationships by integrating the diversity of individuals, having appropriate communication skills while working as a team, having skills to manage care for groups of patients, and integrating professional and ethical standards in their practice. These graduate competencies align with what employers reported as an ideal employee. Employers look for employees that are caring, professional, and able to work as a team player.

Moreover, Figure 4 displays students' perceptions of core competencies gained through the new nursing program. Again, students largely agreed or strongly agreed that they gained these core competencies. Core competencies included clear, effective communication; problem solving skills; working effectively in diverse group; ethical and professional conduct; effective use of information; use of applicable computer technology; and use of scientific and mathematical reasoning. Employers and clinical supervisors indicated that the HLH130 and nursing students demonstrated both the professional and soft skills needed to be a CNA or nurse.

Please rate the extent you agree or disagree that you have attained the following program graduate competencies

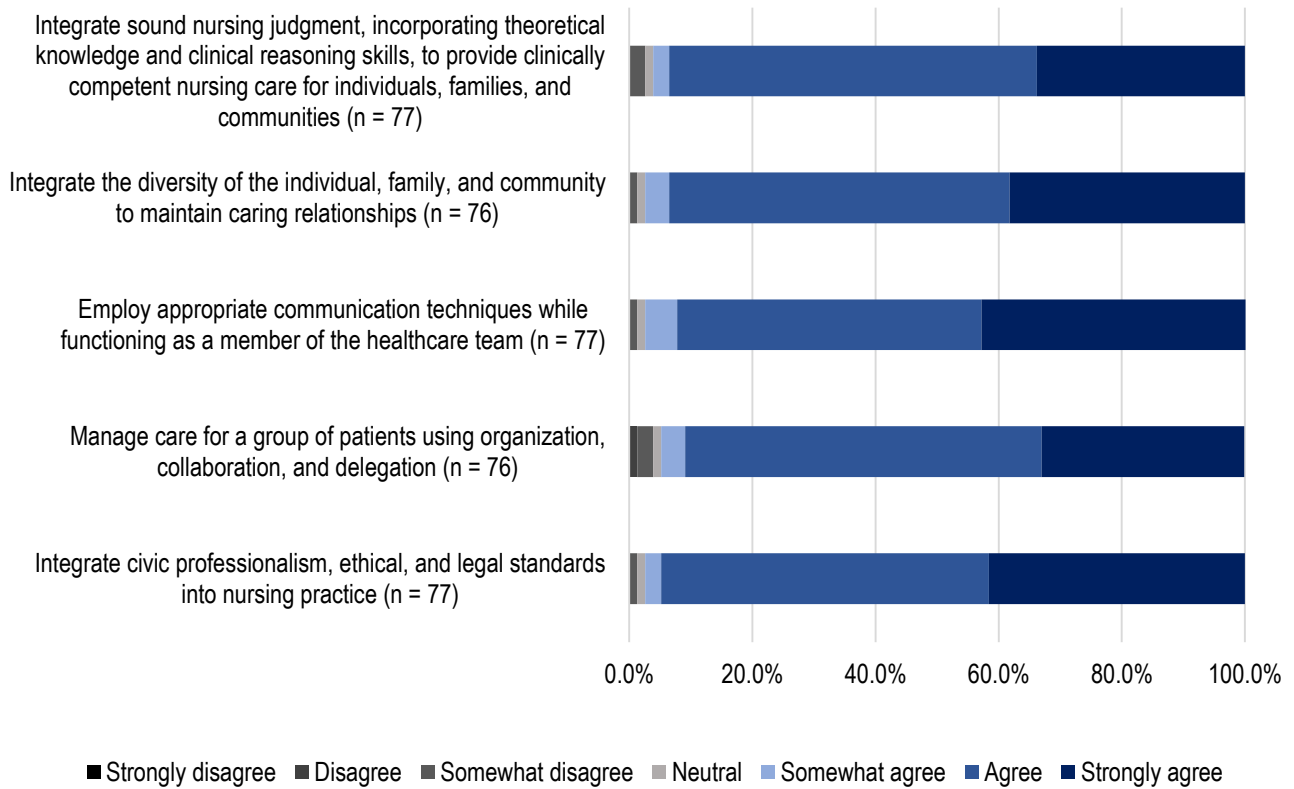


Figure 3. Nursing Students' Perceptions of *Graduate* Competencies Learned as a Result of the New Nursing Program

Please rate the extent you agree or disagree that you have developed the following core competencies

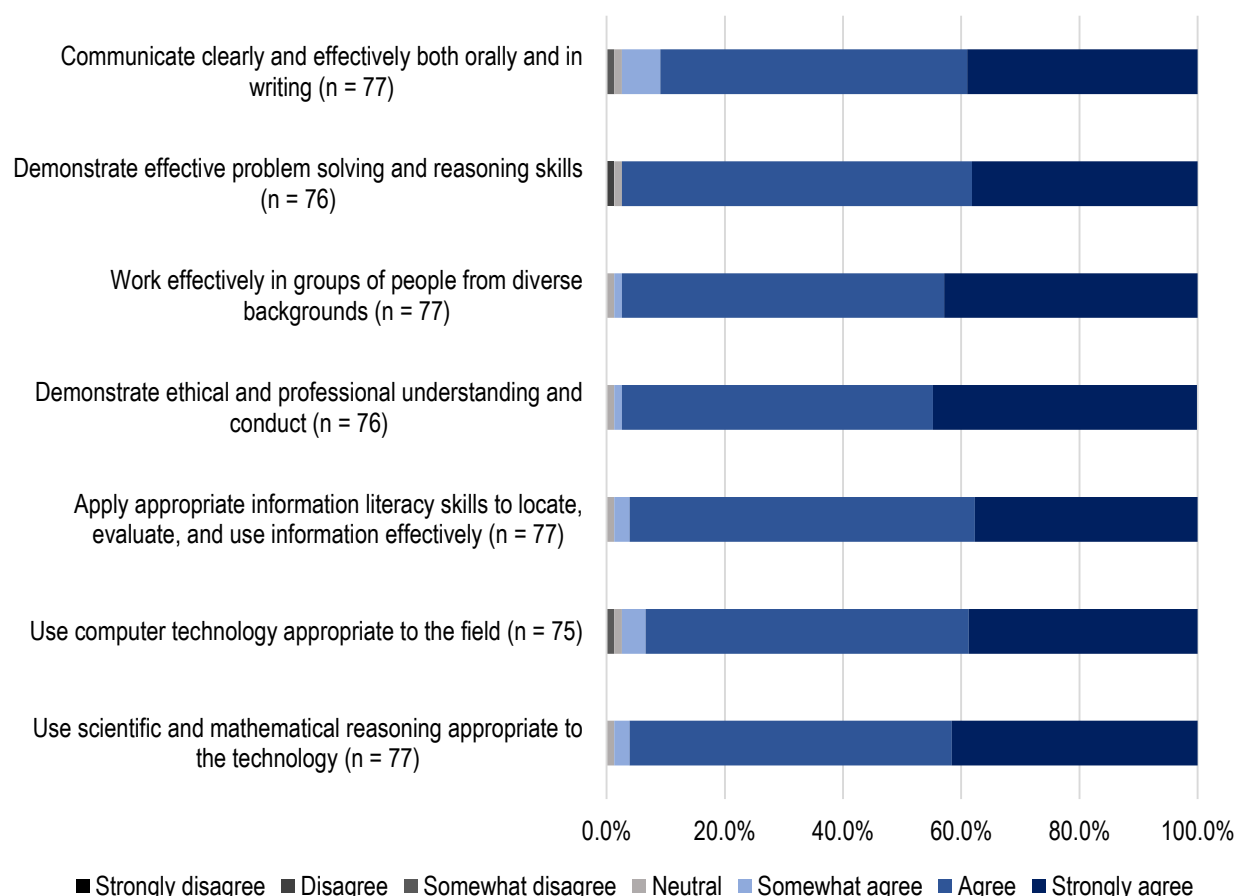


Figure 4. Nursing Students' Perceptions of *Core* Competencies Learned as a Result of the New Nursing Program

Overall, the new nursing program significantly increased the number of students retained in their program after one year. Furthermore, students in the accelerated program had significantly higher program retention rates than students in the traditional program. Nearly all TAA-eligible students in the new nursing program were retained after one year regardless of program duration (i.e., accelerated or traditional). With regard to learning outcomes, most HLH130 students agreed the course prepared them for the new nursing program and felt it was beneficial to have CNA experience prior to enrollment in the program. Upon exiting the new nursing program, most survey respondents agreed they had gained graduate and core competencies as a result of the program. Employers and clinical supervisors supported this finding, indicating that DTCC HLH130 and new nursing program students have the technical and soft skills they are looking for.

Evaluation Question 7.3 asks, "To what extent did the program improve employment outcomes?" To answer this evaluation question, Hezel Associates researchers analyzed nursing program participant extant data. The extant data file contained employment information for

1,246 program participants. Table 21 presents the frequency of nursing program students who were employed one, two, and three quarters after exiting the program. The findings indicate that the majority of students were unemployed for the first three quarters after program exit. Furthermore, from the first quarter to second quarter, 98.0% of students had no change in job status, 1.1% gained employment, and 0.9% lost employment; from the second quarter to third quarter, 97.5% of program completers had no change in job status, 0.2% gained employment, and 2.2% lost employment.

Table 21. Nursing Program Employment Outcomes

Outcome	Employed		Not Employed	
	Frequency	Percentage	Frequency	Percentage
Employed during first quarter after exit	100	8.0	1146	92.0
Employed during second quarter after exit	103	8.3	1143	91.7
Employed during third quarter after exit	78	6.3	1168	93.7

Hezel Associates researchers also analyzed student questionnaire data as well as staff and employer interview data to supplement extant data findings to answer Evaluation Question 7.3. The student questionnaire data are presented in tables and findings and synthesized with staff and employer findings when applicable.

Passing HLH130, or having a CNA certification is a pre-requisite for the new nursing program. This is a benefit to students because it provides nursing students the opportunity to earn a credential and gain employment as a CNA while enrolled in the new nursing program. Students who completed the Nursing Exit Survey were asked if they were able to find work while enrolled in the program as a result of being a CNA. Figure 5 displays the findings; 58.6% agreed to some extent that they were able to find employment as a result of being a CNA. When staff were asked about students' employment, several noted that students who passed the CNA exam and sought employment were typically able to secure a job.

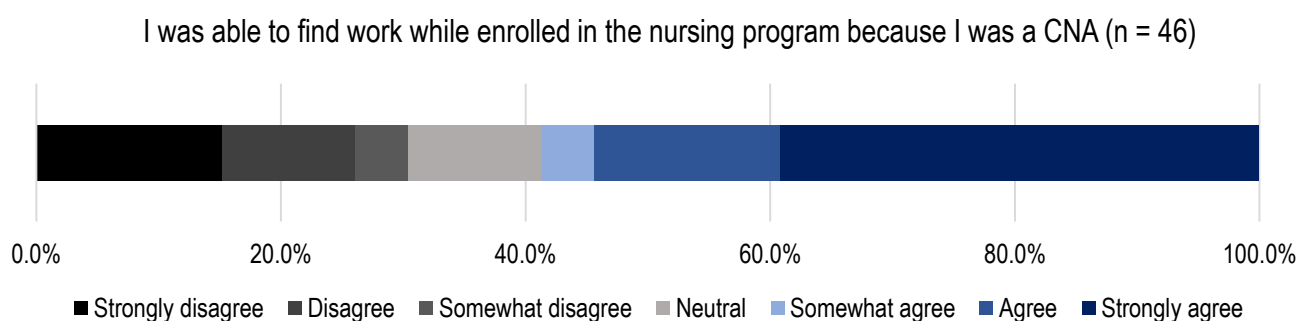


Figure 5. Students' Perceptions of Their Ability to Find Work While Enrolled in the Program due to CNA Certification

Note. Students who responded "Does not apply" are excluded from the frequency percentages.

New nursing program students were asked about their employment status at the start of the program (i.e., while enrolled in NUR170 and NUR190). The findings from students in each course are presented in Tables 22 and 23. Students in NUR170 were typically not working or

employed part-time at the start of the program; the majority were employed part-time in Years 3 and 4. Moreover, students in NUR190 were mostly employed full-time in Year 3, but not in Year 4; however, the low sample size in Year 4 may affect interpretation of these findings.

Table 22. NUR170 Students' Employment Status

Status	Year 2 (n = 57)		Year 3 (n = 184)		Year 4 (n = 159)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Employed full-time	11	19.3	47	25.5	31	19.5
Employed part-time	22	38.6	100	54.3	88	55.3
Currently not working	24	42.1	37	20.1	40	25.2

Table 23. NUR190 Students' Employment Status

Status	Year 3 (n = 25)		Year 4 (n = 3)	
	Frequency	Percentage	Frequency	Percentage
Employed full-time	15	60.0	1	33.3
Employed part-time	6	24.0	0	-
Currently not working	4	16.0	2	66.7

Upon exiting the new nursing program, students were asked again to indicate their employment status. The findings are displayed in Table 24. In Year 3, students were either not working or employed part-time. In Year 4, only 16.7% were employed full-time and the majority (54.5%) were employed part-time. While the small sample size may affect these findings, the future plans of nursing graduates may also affect the frequency of students who are seeking employment after program completion. For example, project staff indicated that they encouraged students to seek employment after graduation; however, many continued their education for a Bachelor of Science in Nursing. They also reported that students who sought employment were typically employed.

Table 24. Nursing Exit Survey Respondents' Employment Status

Status	Year 3 (n = 11)		Year 4 (n = 66)	
	Frequency	Percentage	Frequency	Percentage
Employed full-time	0	-	11	16.7
Employed part-time	6	54.5	36	54.5
Currently not working	5	45.5	19	28.8

Students in NUR170 and NUR190 were also asked to indicate their annual household income while enrolled in the program. The findings are presented for each course in Tables 25 and 26. Students in NUR170 most frequently had an annual household income level less than \$50,000 in Years 2 through 4 (Table 25). Students in NUR190 tended to have a higher annual household income level (Table 26); however, the small sample size may affect interpretation of these findings. NUR190 is geared toward students who have experience as a LPN or paramedic, which may explain the higher annual household income levels.

Table 25. NUR170 Students' Annual Household Income Level

Income Level	Year 2 (n = 52)		Year 3 (n = 184)		Year 4 (n = 157)	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
\$0-24,999	32	61.5	73	39.7	63	40.1
\$25,000-49,999	14	26.9	59	32.1	45	28.7
\$50,000-74,999	5	9.6	22	12.0	33	21.0
\$75,000-99,999	0	-	15	8.2	8	5.1
\$100,000-149,999	1	1.9	12	6.5	3	1.9
\$150,000 +	0	-	3	1.6	5	3.2
Prefer not to answer	0	-	0	-	0	-

Table 26. NUR190 Students' Annual Household Income Level

Income Level	Year 3 (n = 25)		Year 4 (n = 3)	
	Frequency	Percentage	Frequency	Percentage
\$0-24,999	2	8.0	0	-
\$25,000-49,999	6	24.0	1	33.3
\$50,000-74,999	6	24.0	0	-
\$75,000-99,999	7	28.0	2	66.7
\$100,000-149,999	2	8.0	0	-
\$150,000 +	0	-	0	-
Prefer not to answer	2	8.0	0	-

Furthermore, students were asked to indicate their annual household income again upon exiting the program. The findings are displayed in Table 27. The majority (66.2%) continued to have an annual household income level below \$50,000 in Year 4.

Table 27. Nursing Exit Survey Respondents' Annual Household Income Level

Income Level	Year 3 (n = 11)		Year 4 (n = 65)	
	Frequency	Percentage	Frequency	Percentage
\$0-24,999	4	36.4	28	43.1
\$25,000-49,999	2	18.2	15	23.1
\$50,000-74,999	1	9.1	10	15.4
\$75,000-99,999	1	9.1	2	3.1
\$100,000-149,999	0	-	3	4.6
\$150,000 +	0	-	3	4.6
Prefer not to answer	3	27.3	4	6.2

In Years 3 and 4, most students exiting the new nursing program planned to seek employment in the nursing field or continue their education in nursing (Table 28). This is consistent with staff interview findings previously discussed; most students either seek employment or continue on to a Bachelor of Science in Nursing. Most employers and clinical supervisors reported that a 2-year degree is sufficient for employment as an RN; however, some organizations are transitioning to require a 4-year degree for RN positions or will require RNs to enroll in a 4-year degree program within 2 years of employment. This may motivate some students to continue their education directly after completing the new nursing program.

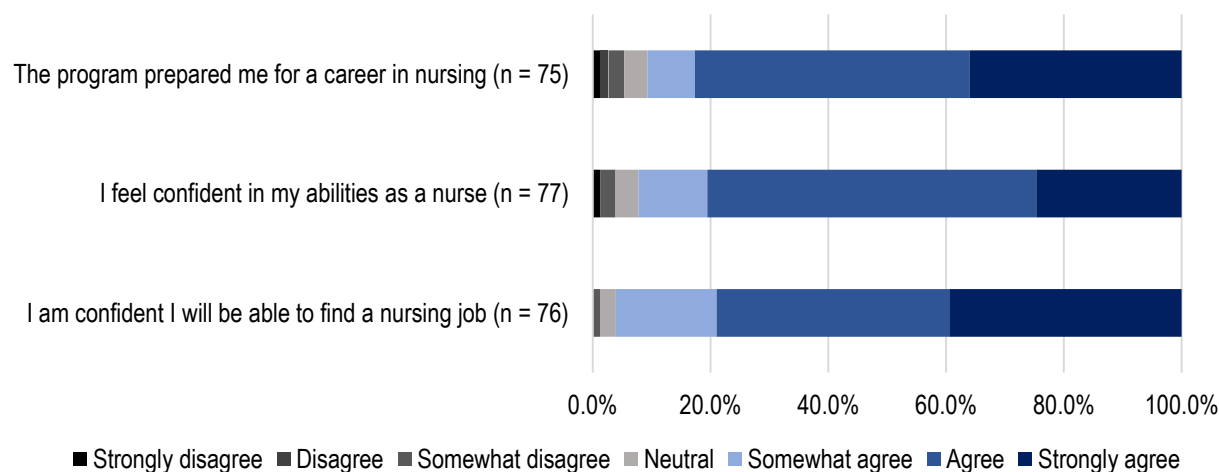
Table 28. Nursing Exit Survey Respondents' Future Plans

Future Plan	Year 3 (n = 21)		Year 4 (n = 129)	
	Frequency	Percentage	Frequency	Percentage
I have already secured a nursing job	1	4.8	11	8.5
I will look for a job in the nursing field	10	47.6	54	41.9
I will continue my education in nursing	10	47.6	61	47.3
I will continue my education in a field other than nursing	0	-	0	-
I will look for a job in a field other than nursing	0	-	1	1.5
I have already secured a job in a field other than nursing	0	-	0	-
Other ^a	0	-	2	1.6

^a Other responses included "I have a job offer in nursing but I am also applying to other positions in nursing" and "Have a nursing job interview after graduation."

Data from the Nursing Exit Survey indicate most program graduates were unemployed or employed part-time around graduation; however, most students are either seeking employment or furthering their education in the nursing field. Figure 6 indicates students' perceptions of their ability to work as a nurse. The majority of students agreed to some extent that (a) the program prepared them for a career in nursing (90.7%), (b) they are confident in their abilities as a nurse (92.2%), and (c) they will be able to find a nursing job (96.1%).

Please rate the extent to which you agree or disagree with the following statements

**Figure 6. Students' Perceptions of Their Preparation for a Career in Nursing**

Note. Students who responded "Do not know" are not included in the frequency percentages.

Though employment data showed high unemployment rates at one, two, and three quarters after program exit, student questionnaire responses suggest new nursing program students are confident they are prepared for a career in nursing. Nearly all survey respondents intend to secure a nursing job or pursue further education in nursing. Although student questionnaire data do not suggest obvious increases in employment and income, the data reflect students' responses just after graduation, which may be too early to discern any improvements in employment outcomes.

MAT140 Outcomes

Though Evaluation Question 7 does not address outcomes of MAT140, Hezel Associates researchers analyzed participant extant data to assess outcomes for this course. MAT140 differed from HLH130 and the new nursing program in that it did not provide students with the opportunity for a credential or degree, but rather served as a bridge to college-level math. While Evaluation Question 7 and the associated subquestions may not apply to MAT140, Hezel Associates researchers felt it would be beneficial to provide summative findings on the demographics and outcomes of students in MAT140. Findings from the extant data are also supplemented by staff interview findings when possible.

Table 29 displays the demographic makeup of students enrolled in the emporium format. The majority (89.7%) of students were White, Black/African American, or Hispanic/Latino. Very few students identified as a veteran (2.3%), having a disability (1.4%), or being TAA-eligible (1.4%). Many students enrolled in the emporium format had taken a remedial English course (40.0%), and nearly half had taken a remedial math course (46.1%).

Table 29. Emporium Format MAT140 Student Demographics (n = 1669)

Category	Frequency	Percentage
Race/Ethnicity		
American Indian/Alaskan Native	6	0.4
Asian	85	5.1
Black/African American	420	25.2
Hispanic or Latino	196	11.7
Native Hawaiian/Other Pacific Islander	3	0.2
White	881	52.8
Two or more	45	2.7
Chose not to indicate	31	1.9
Veteran	38	2.3
Disability	24	1.4
TAA-eligible	24	1.4
Remedial English	667	40.0
Remedial Math	770	46.1

When assessing MAT140 outcomes, Hezel Associates researchers analyzed course pass rates, comparing students in the emporium format to students in the non-emporium format. There were 1,669 students in the emporium format and 2,124 in the non-emporium. The mean age of students in the emporium format ($M = 25.43$, $SD = 7.814$) was similar to the mean age of students in the non-emporium format ($M = 27.41$, $SD = 8.388$). The male to female ratio of the two groups was also similar (Table 30).

Table 30. Emporium and Non-emporium Students' Gender

Income Level	Emporium (n = 1668 ^a)		Non-emporium (n = 2124)	
	Frequency	Percentage	Frequency	Percentage
Male	986	59.1	1269	59.7
Female	682	40.9	855	40.3

^a Gender data was missing for one students in the emporium format group.

A chi-square test was conducted to determine if emporium and non-emporium MAT140 students differed in course pass rates. The crosstabulation is presented in Table 31. Results indicated that students in the emporium and non-emporium format significantly differed in their course pass rates, $\chi^2 (1, N = 3,793) = 33.66, p < .001$. Students in the non-emporium format had significantly higher MAT140 pass rates. This aligns with findings from the staff interviews; project staff indicated that MAT140 pass rates of students in the emporium format “weren’t where we wanted them to be.” Staff explained that MAT140 is a difficult course with a lot of content. Students who were able to keep up with the benchmarks often did well and passed the course. Furthermore, students who did pass the course tended to do well in higher level math courses.

Table 31. Comparison of Course Pass Rates for Students in Emporium and Non-emporium MAT140

Outcome	Emporium (n = 1669)		Non-emporium (n = 2124)	
	Frequency	Percentage	Frequency	Percentage
Pass	1021	61.2	1490	70.2
Fail	648	38.8	634	29.8

Of the students in the emporium format who passed MAT140, 75.2% passed with one attempt, as compared to 87.8% of students in the non-emporium format who passed the course in one attempt. Students in the emporium format repeated the course up to 5 times; however, some of these students withdrew from the course and did not necessarily fail the course.

Overall, students in the emporium format of MAT140 did not demonstrate a higher pass rate than students in the non-emporium format. The course contained a lot of content and required students to be independent and structure their own self-guided learning. Though non-emporium course pass rates were significantly higher, staff reported that students who did succeed in emporium MAT140 were sufficiently prepared for college-level math courses and often did well in those courses.

LIMITATIONS

Considering limited sample size of data from some of the student questionnaires and the use of qualitative data findings, the reader should use caution when estimating the extent to which opinions formed through these data can speak for the population as a whole. The findings from these data are intended to provide feedback on the DTCC TAACCCT Round 2 project activities only.

CONCLUSIONS

Based on findings from all quantitative and qualitative data collected through the 4-year grant, Hezel Associates has formed the following conclusions regarding the DTCC TAACCCT Round 2 project.

- **The project was implemented with fidelity to the work plan.** Despite change in project leadership and challenges with curricula approval, DTCC project staff implemented MAT140, HLH130, and the new nursing program as proposed to the USDOL and with few delays in achieving milestones by the intended timeline. Though project implementation took place across four campuses, each campus successfully carried out project activities efficiently and successfully.

- **Several programmatic improvements were made during implementation of the project.** DTCC improved the nursing program and MAT140 by facilitating increased alignment among the campuses. The nursing program now has a unified curriculum among the three campuses offering the nursing program. MAT140 instruction among the four campuses offering this course is also more consistent. Having consistency across campuses ensures students are receiving the same quality education no matter their location.
- **Project staff worked collaboratively to select, use, and create curricula.** Project staff from each campus and from different position levels (i.e., faculty, department chairs, and deans of instruction) formed project teams. The faculty developed curriculum design groups and made decisions based on majority ruling. Curriculum decisions were approved by department chairs and deans of instruction. The nursing program curriculum design group included members from ACEN which was beneficial since the curriculum also had to be approved by this accrediting body. In addition, the MAT140 curriculum design group included faculty who contributed to the design of TAACCCT Round 1 emporium courses. This was beneficial for the redesign of MAT140 into the emporium model because the faculty had valuable insights on implementing this format based on previous experience.
- **The project had an effective program administrative structure.** The TAACCCT Round 2 Project Director was organized, communicated well, and kept project activities on track. Project teams were formed for each DTCC campus and met in person when possible. Project teams typically corresponded through phone, email, and Blackboard. Having regular communications throughout the project allowed project teams to integrate input from each campus and develop uniformity in project implementation.
- **TAACCCT Round 2 funds enabled DTCC to improve the new nursing program and MAT140, offer different program delivery methods, and provide support services to students.** Grant funds provided DTCC the opportunity to increase their classroom and lab space for MAT140, HLH130, and the new nursing program, as well as update technology and equipment. Moreover, using grant funds, DTCC was able to redesign MAT140 into an emporium format and the new nursing program to a concept-based curriculum. Both MAT140 and the nursing program provided accelerated options as well. In addition, students had access to tutors, faculty office hours, and other support services. These programmatic improvements will greatly benefit the new nursing program in the future and will be sustained through DTCC's operating budgets. However, the math department is undergoing a redesign and MAT140 will no longer be offered.

- **In-depth assessments of participants' abilities, skills, and interests were conducted for students enrolling in the new nursing program.** The new nursing program has an in-depth ranked admissions process which includes an entrance exam, residency, and educational background, and students are subject to a background check and drug testing. There is no in-depth assessment for students enrolling in MAT140; however, students are placed in the course through a placement exam, SAT scores, an advisor, transfer credits, or after passing an elementary math course. DTCC also has additional processes and assessments in place for all students regardless of the program, including credit for prior learning and experience through entrance exams, military and academic transcript reviews, and portfolio reviews with department chairs or faculty.
- **Local industry partners provided clinical sites and employment opportunities for students in HLH130 and the new nursing program.** Project staff developed relationships with local facilities to establish clinical sites for HLH130 and new nursing program students. Through clinical experiences, students had the opportunity to gain hands-on work experience in the field; employers were able to assess strengths and weaknesses in technical and soft skills of potential new hires. Employer and clinical supervisors have been satisfied with the skills of the HLH130 and new nursing program students.
- **Most HLH130 and new nursing program students pass the relevant certification/licensure exams when attempted.** Though many HLH130 students did not take the CNA certification exam, most that did take the exam passed. A vast majority of new nursing program students passed the NCLEX exam which provides them licensure for nursing; however, there was not a statistically significant increase from the old nursing program. In addition, new nursing program students in the accelerated format had significantly higher NCLEX pass rates than students in the traditional format. Most students in HLH130 and the new nursing program are enrolled part-time and therefore, take longer to complete the program. Given this is a new program, nursing department staff should continue to monitor program completion and NCLEX pass rates as this may change over time as more students graduate from the program.
- **The new nursing program resulted in significantly higher program retention rates.** Compared to the old nursing program, the new nursing program students have significantly higher program retention rates. Moreover, within the new nursing program, students in the accelerated program have significantly higher retention rates than students in the traditional program.
- **New nursing program students are confident they have gained various nursing competencies as a result of the program.** Despite high unemployment rates portrayed in the extant employment data findings, most nursing students who participated in the Nursing Exit Survey agreed that they had gained the professional and technical skills needed for a career in nursing. Employers and clinical supervisors also indicated that DTCC HLH130 and new nursing program students demonstrate the competency level they are look for in employees. Furthermore, new nursing program students are confident they have the ability to gain employment as a nurse.

- **The emporium format of MAT140 did not have a positive impact on course pass rates.** Students in the non-emporium format had significantly higher MAT140 pass rates. This may be due to the structure of the course, which required students to be independent and self-motivated to keep up with course benchmarks. While the pass rates of students in the emporium model were not as successful as anticipated, students who did pass the courses tended to do well in additional college-level math courses.

REFERENCES

- Dey, I. (1993). *Qualitative data analysis: A user-friendly guide for social scientists*. London, UK: Routledge.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: SAGE Publications.

APPENDIX A: WORK PLAN

Activities		Implementer	Costs		Time		Deliverables
Strategy 1: Accelerate student completion of courses in math	1. Plan/implement one Emporium mathematics course in addition to Delaware Tech's Developmental Emporium Math Program (implemented in TAACCCT 1)	Emporium instructors, Registrar, DIET, CCIT, Financial Aid, Advisors, Student Services	Total:	\$371,924	Start:	October 2012	<ul style="list-style-type: none"> • Emporium Model Curriculum for college level course (MAT140–Essentials of College Algebra) • Comparative study of success/persistence/completion of Emporium/non-Emporium students in mathematics and in overall program
			Equipment:	\$186,755	End:	September 2015	
			Year 1:	\$36,303	Milestones	1. Establish math curriculum committee and begin curriculum development 2. Procure computer/peripherals 3. Complete studio learning labs and classroom labs 4. Train faculty, advisors, counselors 5. In fall semester implement a 16-week emporium/ lecture model for MAT140 college level math course, 120 students	1. January–May 2013 2. May–August 2013 3. May–August 2013 4. May–December 2013 5. August–December 2013
			Year 2:	\$88,769		1. Student and faculty end-of semester assessments 2. Offer a 16-week MAT140 class in Spring and Fall semesters, 160 students 3. Develop MAT140 emporium/lecture curriculum for accelerated 8-week course 4. Implement 8-week MAT140 emporium/lecture model, 80 students	1. December 2013 2. January–May 2014 & August–December 2014 3. January–May 2014 4. August–December 2014
			Year 3:	\$60,097		1. Student and faculty end-of-semester assessments 2. Offer 16- and 8-week versions of MAT140 emporium/lecture classes (240 students total) 3. Student and faculty end-of semester assessments 4. Investigate the feasibility to expand EM to other college-level math courses 5. Compare success/completion of Emporium/non-Emporium students 6. Complete persistence/retention analyses	1. December 2014 2. January–May 2015 and August–December 2015 3. May and December 2015 4. May–August 2015 5. January–September 2015 6. January–September 2015

Activities		Implementer	Costs		Time		Deliverables
Strategy 2: Accelerate student completion of nursing training leading to acceptable industry credentials	1. Plan and implement HLN130 as a pre-requisite for admission to the Associate Degree Nursing program (to include sufficient training to allow completers to sit for the CNA exam)	Nursing faculty representative from each campus	Total:	\$856,389	Start:	October 2012	<ul style="list-style-type: none"> • Approval of college wide course and DOLTC CNA approval • Syllabus, curriculum, lab space, and clinical placement sites for HLH 130 • Successful students apply for nursing program
			Equipment:	\$---	End:	September 2016	
			Year 1:	\$332,733	Milestones	1. Develop HLH 130 and obtain institutional and Division of long term care approval for class and CNA course 2. Obtain clinical placement commitments in long-term care facilities 3. Expand lab space to accommodate pool of HLH students 4. Obtain institutional approval 5. Enroll 230 students into HLH 130	(1,2,) January–August 2013 (3) Feb–Dec. 2013 (4,5) April–December 2013
			Year 2:	\$261,828		1. Enroll 460 students into HLH 130 2. Review/revise curriculum	(1,2) January–December 2014
			Year 3:	\$261,828		1. Enroll 460 students into HLH 130 2. Review/revise curriculum	(1,2) January–September 2015

Activities		Implementer	Costs		Time		Deliverables
Strategy 2: Accelerate student completion of nursing training leading to acceptable industry credentials	2. Plan and implement a unified, accelerated nurse training program with multiple entry/exit points along the pathway to an Associate in Applied Science (Nursing)	Nursing faculty, Clinical coordinators, College-wide curriculum committee, TAACCCT 2 PI, CCIT, Academic Affairs	Total:	\$594,244	Start:	October 2012	<ul style="list-style-type: none"> Common policies and procedures for students coming in or exiting the program who are CNAs, LPNs and Paramedics available Agreements updated Attainment of approvals Technology available for use Degree program with stacked credentials & multiple entry/exit points Technology-enhanced course delivery across all nursing courses and all campuses Students complete program Technology-enhanced course delivery across all nursing courses and all campuses
			Equipment:	\$69,000	End:	September 2016	
			Year 1:	\$151,587	Milestones	1. Standardize admission requirements across campuses 2. Design an aligned, accelerated curriculum to be implemented at all campuses 3. Identify standard pathways into and out of the program for CNAs, LPNs, and Paramedics 4. Renegotiate articulation and transfer agreements as needed 5. Obtain institutional, Delaware Board of Nursing and the National League for Nursing Accrediting Commission approval 6. Develop plan for use of Lecture Capture 7. Procure hardware and provide professional development to support the use of Lecture Capture technology 8. Conduct faculty/advisor training and or conferences 9. Partner with an external content expert regarding new curriculum design	
			Year 2:	\$297,122		1. Admit 90 students into the accelerated program 2. Develop and implement a transition plan for switching from traditional to accelerated curriculum 3. Reassign faculty teaching assignments to match new curriculum 4. Provide appropriate professional development for faculty 5. Market new program and promote the changes to prospective students and other stakeholders	
			Year 3:	\$297,122		1. Admit 90 students into the accelerated program 2. Review/revise curriculum 3. Provide professional development 4. Continue marketing 5. First accelerated cohort exits program	

APPENDIX B: DOCUMENT REVIEW FRAMEWORK

Round 2 TAACCCT Grant Document Review Framework

Format	Qualitative research to assess fidelity with which program activities were implemented and compliance with the timeline.
Timeline	Data collection and analysis will be conducted annually in September.
Process	<p>Documents will be collected through the Project Director, Kelly Davis, and other DTCC staff. Documentation will be provided to Hezel Associates via email or secure file transfer protocol (SFTP).</p> <p>The activities in the work plan will guide the identification of documentation to use as evidence.</p> <p>Once documents have been collected and sorted, content in each document will be examined and entered in the following matrix aligned with the appropriate milestones. Hezel Associates will list each document and what DTCC has done to justify completing that milestone under Evidence. The date that that dimension was fulfilled will be listed under Actual Date. Status for meeting the listed milestones will be marked Met, Not Met, and In Progress.</p>
Instructions	Provide documentation supporting milestones, activities, and deliverables listed in the following matrix. Include any evidence of program implementation and compliance with the work plan timeline. Complete the Record of Submitted Documents on the first page of the Document Review Framework, all document names and a description of each document should be included in the table on the first page. Documents can be submitted as attachments via email, Hezel Associates' internal server via SFTP, or DTCC's file transfer protocol.
Definitions	<p>Year: Year of the grant in which the milestone will be met.</p> <p>Milestone: Milestones as listed in the work plan included in the technical proposal.</p> <p>Deliverable: Project deliverables as defined in the work plan</p> <p>Target: Target date established in the work plan.</p> <p>Status: Status for meeting milestones: Met, Not Met, In Progress.</p> <p>Actual Date: Date the milestone was met.</p> <p>Evidence: Document providing evidence of milestone and explanation for how the milestone was completed.</p>

Record of Submitted Documents

[illegible]

Strategy 1: Accelerate student completion of courses in math						
Activity 1: Plan/implement one Emporium mathematics course in addition to Delaware Tech's Developmental Emporium Math Program (implemented in TAACCCT 1)						
Year	Milestones	Deliverables	Target Date (established in work plan)	Actual Date (milestone met)	Current Status	Evidence
1	a. Establish math curriculum committee and begin curriculum development	1. Emporium Model Curriculum for college level course (MAT140– Essentials of College Algebra)	Jan-May 2013			
	b. Procure computer/peripherals		May-Aug 2013			
	c. Complete studio learning labs and classroom labs		May-Aug 2013			
	d. Train faculty, advisors, counselors		May-Dec 2013			
	e. In fall semester implement a 16-week emporium/lecture model for MAT140 college level math course, 120 students		Aug-Dec 2013			
2	a. Student and faculty end-of semester assessments	2. Comparative study of success/ persistence/ completion of Emporium/non-Emporium students in mathematics and in overall program	Dec 2013			
	b. Offer a 16-week MAT140 class in Spring and Fall semesters, 160 students		Jan-May 2014 & Aug-Dec 2014			
	c. Develop MAT140 emporium/lecture curriculum for accelerated 8-week course		Jan-May 2014			
	d. Implement 8-week MAT140 emporium/lecture model, 80 students		Aug-Dec 2014			
3	a. Student and faculty end-of-semester assessments		Dec 2014			
	b. Offer 16- and 8-week versions of MAT140 emporium/lecture classes (240 students total)		Jan-May 2015 & Aug-Dec 2015			
	c. Student and faculty end-of semester assessments		May-Dec 2015			
	d. Investigate the feasibility to expand EM to other college-level math courses		May-Aug 2015			
	e. Compare success/completion of Emporium/non-Emporium students		Jan-Sept 2015			
	f. Complete persistence/retention analyses		Jan-Sept 2015			

Strategy 2: Accelerate student completion of nursing training leading to acceptable industry credentials						
Activity 1: Plan and implement HLN 130 as a pre-requisite for admission to the Associate Degree Nursing program (completers to sit for the CNA exam)						
Year	Milestones	Deliverables	Target Date (established in work plan)	Actual Date (milestone met)	Current Status	Evidence
1	a. Develop HLH 130 and obtain institutional and Division of long term care approval for class and CNA course	1. Approval of college wide course and DOLTC CNA approval 2. Syllabus, curriculum, lab space, and clinical placement sites for HLH 130	Jan-Aug 2013			
	b. Obtain clinical placement commitments in long-term care facilities		Jan-Aug 2013			
	c. Expand lab space to accommodate pool of HLH students		Feb-Dec 2013			
	d. Obtain institutional approval		Apr-Dec 2013			
	e. Enroll 230 students into HLH 130		Apr-Dec 2013			
2	a. Enroll 460 students into HLH 130	3. Successful students apply for nursing program	Jan-Dec 2014			
	b. Review/revise curriculum		Jan-Dec 2014			
3	a. Enroll 460 students into HLH 130		Jan-Sept 2015			
	b. Review/revise curriculum		Jan-Sept 2015			

Strategy 2: Accelerate student completion of nursing training leading to acceptable industry credentials						
Activity 2: Plan and implement a unified, accelerated nurse training program with multiple entry/exit points along the pathway to an Associate in Applied Science (Nursing)						
Year	Milestones	Deliverables	Target Date (established in work plan)	Actual Date (milestone met)	Current Status	Evidence
1	a. Standardize admission requirements across campuses	1. Common policies and procedures for students coming in or exiting the program who are CNAs 2. Agreements updated 3. Attainment of approvals 4. Technology available for use 5. Degree program with stacked credentials & multiple entry/exit points 6. Technology-enhanced course delivery across all nursing courses and all campuses. 7. Students complete program 8. Technology-enhanced course delivery across all nursing courses	Jan-May 2013			
	b. Design an aligned, accelerated curriculum to be implemented at all campuses		Jan-May 2013			
	c. Identify standard pathways into and out of the program for CNAs, LPNs, and Paramedics		Jan-May 2013			
	d. Renegotiate articulation and transfer agreements as needed		Jan-Dec 2013			
	e. Obtain institutional, Delaware Board of Nursing and the National League for Nursing Accrediting Commission approval		May-Dec 2013			
	f. Develop plan for use of Lecture Capture		Jan-Dec 2013			
	g. Procure hardware and provide professional development to support the use of Lecture Capture technology		Jan-Dec 2013			
	h. Conduct faculty/ advisor training and or conferences		Jan-Dec 2013			
	i. Partner with an external content expert regarding new curriculum design		Jan-Dec 2013			
	a. Admit 90 students into the accelerated program		Jan-Dec 2014			
2	b. Develop and implement a transition plan for switching from traditional to accelerated curriculum		Jan-Dec 2014			
	c. Reassign faculty teaching assignments to match new curriculum		Jan-Dec 2014			
	d. Provide appropriate professional development for faculty		Jan-Dec 2014			

	e. Market new program and promote the changes to prospective students and other stakeholders	and all campuses	May-Dec 2014			
3	a. Admit 90 students into the accelerated program		Jan-Sept 2015			
	b. Review/revise curriculum		Jan-Sept 2015			
	c. Provide professional development		Jan-Sept 2015			
	d. Continue marketing		Jan-Sept 2015			
	e. First accelerated cohort exits program		Sept 2015			

APPENDIX C: STAFF IN-DEPTH INTERVIEW PROTOCOL

TAACCCT 2 Grant Year 4 Program Staff In-Depth Interview Protocol

DTCC Program Components: Accelerated Nursing
HLH 130
MAT140 (Math Emporium)

Format	<p>Qualitative research to collect opinions, and will span a board range of issues regarding:</p> <ul style="list-style-type: none">• Governance/Member role• Program outcomes• Reflection <p>Semi-structured interview protocol outlines pre-determined questions, and allows the interview to probe and pursue unplanned tangents as conversations warrant.</p> <p>Respondents will be recruited via email.</p>
Targets	<p>Respondents will be individuals involved in either the Accelerated Nursing, HLH130 course, or Math Emporium program development.</p>
Timeline	<p>Interviews will take approximately 30-45 minutes and will be conducted June 2016.</p>

Initial Recruiting Email

Delaware Technical Community College (DTCC) has selected Hezel Associates, a research firm in Syracuse, NY, to conduct the independent evaluation of the TAACCCT Round 2 grant awarded to DTCC.

As a part of our responsibilities, we will be conducting phone interviews with representatives of each of the DTCC campuses to better understand the grant funded activities. You have been selected as a potential participant due to your involvement in the grant activities. The purpose of our study is to provide formative feedback to DTCC.

Would you be available for an interview between May 9 and June 17? Telephone interviews will require approximately 30-45 minutes. If so, please reply to this email indicating the dates and times you are available and the phone number where you can be reached. You will receive a reply confirming your scheduled time.

This study is being coordinated with Kelly Davis, TAACCCT Program Director, Delaware Technical Community College. If you have any questions, she can be reached by email at kdavis17@dtcc.edu. You are also welcome to contact me if you need more specific information regarding details of the evaluation study, or may email Solutions IRB (our external review board charged with ensuring we treat evaluation study participants ethically) at participants@solutionsirb.com.

Thank you in advance for your support and patience as we move forward with this important study.

Sincerely,

[SIGNATURE OF SENDER]

Pre-Interview Confirmation (via email)

Thank you for agreeing to participate in the DTCC TAACCCT 2 grant evaluation process.

Your interview has been scheduled for:
[INSERT DATE / TIME]

We will call you at [INSERT PHONE #]
We expect the interview will last 30 minutes.

I have attached an informed consent document to this email. Please review the information before the interview. If you have any questions about the consent document or the study, please feel free to reach out to me by phone or email.

Your individual responses will be kept confidential and aggregated for the report. No personally

identifying information will be reported, and we will make every effort to protect your identity when we present our findings.

Thank you for your participation,

[SIGNATURE OF SENDER]

Introduction

Hello, this is _____ from Hezel Associates, I am calling about your interview. Is now still a convenient time to talk?

As a reminder, your responses will be kept confidential and aggregated for the report. No personally identifying information will be reported, and we will make every effort to protect your identity when we present our findings. You can stop the interview at any time and skip any questions you are not comfortable answering. You can also choose to withdraw your responses.

Have you read the informed consent document that was emailed to you? Do you have any questions concerning the consent form or the study?

Do you agree to participate in the interview?

May I have your permission to record our conversation? The recording is strictly used to support my note-taking, and will not be used for any other purpose.

IF PARTICIPANT DECLINES RECORDING, RESEARCHER WILL ONLY TAKE NOTES.

Governance & Member Role

I'd like to start off with the structure and organizational aspects of [program name] and the grant.

1. What is your role in the TAACCCT grant?
2. What have you been focused on for the grant since last fall?
3. What level of support do you receive from DTCC in regards to your project obligations?
(Probe: what needs are not being met, last requests for spending)

Programs

Now, a few questions about your course/program...

Math

4. Can you tell me about if/how you are scaling up the emporium model to other courses?
(positives/negatives, strengths/weaknesses, group interactions, support from partners, current status)
5. What are some of the student outcomes you have seen in Math 140? (example: completion rate)
6. What are some of the differences you expect to see across campuses?
(Probe: emporium model, Math 140 outcomes)

All Programs

7. How has the program been improved over the course of this year? Over the course of the grant?
8. Do you feel as though your department's process for evaluating the course/program was successful? What were some of the steps in the process? (Probe: did it meet the needs of students/faculty, was input heard, appropriate changes made)
9. Can you describe whether or not the accelerated model is working for students?
10. Tell me about how students are exiting comparable to the old program/course before the grant.
11. How is the program/course being sustained since TAACCCT2 program spending concluded September 30th, 2015?
12. Describe how you have been involved in the preparation of grant deliverables such as subject matter expert reviews and open education materials.

Reflections

Just a few more questions reflecting back on the grant...

13. What is your opinion of the TAACCCT Round 2 project? (*Probe: strengths, weaknesses, areas in need of attention, specifics of their program*)
 - a. What is your overall opinion of the project over the 4-year grant period?
14. Is the program meeting your expectations? Why do you say that?
15. Is there anything else you'd like to add that we haven't discussed?

APPENDIX D: EMPLOYER IN-DEPTH INTERVIEW PROTOCOL

TAACCCT 2 Grant Clinical Supervisor/Employer Interview Protocol

Program	Accelerated Nursing HLH 130
Format	<p>Qualitative research to collect opinions, and will span a broad range of issues regarding professional experiences with current participants and graduates.</p> <p>Semi-structured interview protocol outlines pre-determined questions, and allows the interviewer to probe and pursue unplanned tangents as conversations warrant.</p> <p>Respondents will be recruited via email.</p>
Targets	Respondents will be individuals who have supervised or hired individuals from the Nursing program and/or HLH130 course.
Timeline	Interviews will take approximately 30-45 minutes and will be conducted in July through August 2016.

Initial Recruiting Email

Delaware Technical Community College (DTCC) has selected Hezel Associates, a research firm in Syracuse, NY, to conduct the independent evaluation of the TAACCCT Round 2 grant awarded to DTCC.

As a part of our responsibilities, we will be conducting phone interviews with individuals who have interacted with DTCC nursing students and graduates. You have been selected as a potential participant due to your involvement with program participants and graduates. The purpose of our study is to provide formative feedback to DTCC.

Telephone interviews will require approximately 30-45 minutes. Would you be available for an interview between July 7 and August 12? If so, please reply to this email indicating the dates and times you are available and the phone number where you can be reached. You will receive a reply confirming your scheduled time.

This study is being coordinated with Kelly Davis, TAACCCT 2 Principal Investigator. If you have any questions, she can be reached by email at kdavis17@dtcc.edu. You are also welcome to contact me if you need more specific information regarding details of the evaluation study, or may email Solutions IRB (our external review board charged with ensuring we treat evaluation study participants ethically) at participants@solutionsirb.com.

Thank you in advance for your support as we move forward with this important study.

Sincerely,

[SIGNATURE OF SENDER]

Pre-Interview Confirmation (via email)

Thank you for agreeing to participate in the DTCC TAACCCT 2 grant evaluation process. Your interview has been scheduled for [INSERT DATE / TIME]. We will call you at [INSERT PHONE #]. We expect the interview will last 30 minutes.

I have attached an informed consent document to this email. Please review the information before the interview. If you have any questions about the consent document or the study, please feel free to reach out to me by phone or email.

Your individual interview responses will be kept confidential and aggregated for the report. No personally identifying information will be reported, and we will make every effort to protect your identity when we present our findings.

Thank you for your participation,

[SIGNATURE OF SENDER]

Introduction

Hello, this is _____ from Hezel Associates, I'm calling to conduct your interview. Is now still a convenient time to talk?

As a reminder, your responses will be kept confidential and aggregated for the report. No personally identifying information will be reported, and we will make every effort to protect your identity when we present our findings. You can stop the interview at any time and skip any questions you are not comfortable answering. You can also choose to withdraw your responses.

Do you have any questions concerning the consent form or the study?

Do you agree to participate in the interview?

May I have your permission to record our conversation? The recording is strictly used to support my note-taking, and will not be used for any other purpose.

IF PARTICIPANT DECLINES RECORDING, RESEARCHER WILL ONLY TAKE NOTES.

Background

1. To begin, could you tell me about your position and how it relates to the nursing program at DTCC? (*Probe: where they work, clinical supervisor vs. employer, how long is their relationship with DTCC*)

Experiences with Participants/Graduates

Next, I have a few questions about your interactions with program participants or graduates

Clinical Supervisors:

2. Could you describe any differences in nursing students from the new program as compared to the old programs?
3. How has the CNA requirement impacted nursing students in terms of their clinical performance?

Employers:

4. What are some of your priorities in your hiring decisions for nurses? (*Probe: CNA, experience, school, degree, personality*)

Both:

5. What is your opinion of the nursing students from DTCC? (*Probe: skill set, career readiness, qualifications, work performance*)
6. How do the skills and content taught in the DTCC program align with the skills and knowledge you are looking for in a nurse?
7. What is your opinion on career preparation of students in the DTCC nursing program?
8. What are some improvements that could be made to the program? (*Probe: skills taught, areas in need of attention*)
9. Any other thoughts you would like to add?

APPENDIX E: STUDENT QUESTIONNAIRES

MAT140 Student Questionnaire

DTCC TAACCCT Round 2 MAT140 Emporium Course Survey

1. On which campus are you taking your MAT140?
 - a. Stanton
 - b. Wilmington
 - c. Terry
 - d. Owens

2. How long is your MAT140 course?
 - a. 8 weeks
 - b. 10 weeks
 - c. 12 weeks
 - d. 16 weeks

3. What is your gender?
 - a. Female
 - b. Male
 - c. Transgender

4. What is your age?
 - a. Under 18
 - b. 18-24 years old
 - c. 25-34 years old
 - d. 35-44 years old
 - e. 45+ years old

5. What is your race/ethnicity?
 - a. White/Caucasian
 - b. African American/Black
 - c. Hispanic/Latino/Chicano
 - d. Asian/Pacific Islander
 - e. American Indian/Alaskan Native
 - f. Other (please describe) _____

6. Please respond Yes or No to the following questions:

	Yes	No	Do not know
Are you a veteran or spouse eligible for Priority of Service?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you consider yourself to be a student with a disability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a Pell-eligible student? (<i>Federal Grant Awards</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a TAA-eligible student? (<i>Trade Adjustment Assistance Benefits</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Employment Status:

- a. Employed full-time
- b. Employed part-time
- c. Currently not working
- d. Retired

8. How many credits are you currently enrolled in at DTCC?

- a. 0-4
- b. 5-11
- c. 12 or more

9. How many hours a week do you spend in lecture and in the Math Success Center for MAT140?

- a. 0-4
- b. 5-9
- c. 10-14
- d. More than 15

10. How many additional hours a week do you spend on MAT140 outside of the required time?

- a. 0-4
- b. 5-9
- c. 10-14
- d. More than 15

11. If I do not pass all the quizzes and all the tests with a minimum of 75% or better this semester, I do not pass the course.

- a. True
- b. False

12. I am able to keep up with the pace of this course.

- a. Yes
- b. No

13. I find the help in the Math Success Center useful:

- a. Always
- b. Sometimes
- c. Never

14. For questions below, please rate how helpful you find the following learning aids on a scale from 1-7 where 1 = not helpful and 7 = very helpful.

	1	2	3	4	5	6	7	Do Not Know
The Study Plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
View an Example/help me solve this	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Videos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optional Review	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. What additional tools, resources, requirements, etc. would be helpful to keep you motivated and on track throughout this course?

16. What percentage of your time on this course was spent in lecture vs. in the Math Success Center?

- a. 0-24% in lecture and 75-100% in Math Success Center
- b. 25-49% in lecture and 51-74% in Math Success Center
- c. 50% in lecture and 50% in Math Success Center
- d. 51-74% in lecture and 25-49% in Math Success Center
- e. 75-100% in lecture and 0-24% in Math Success Center

17. On a scale of 1 to 7, where 1 = not beneficial and 7 = very beneficial, how beneficial was the following?

	1	2	3	4	5	6	7	Do Not Know
Classroom Instruction Time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Did you take MAT015: Elementary Algebra prior to this course?

- a. Yes (go to Q20)
- b. No (go to Q19)

19. Which of the following placed you in MAT140?

- a. College placement exam
- b. SAT scores
- c. College advisor
- d. Another institution
- e. Passed MAT015
- f. Do not know

20. For the following list of student support services, please indicate both if the service was offered and if you personally used that support service.

	Service Offered	Service Used	Do Not Know
Math Success Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Success Center Tutors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drop-in Tutoring Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instructor Office Hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Comments:

NUR170 Student Questionnaire

DTCC TAACCCT Round 2 Nursing 170 Course Survey

1. Which campus are you enrolled in the NUR170?
 - a. Stanton
 - b. Wilmington
 - c. Terry
 - d. Owens
2. What is your gender?
 - a. Female
 - b. Male
 - c. Transgender
3. What is your age?
 - a. Under 18
 - b. 18-24 years old
 - c. 25-34 years old
 - d. 35-44 years old
 - e. 45+ years old
 - f. Choose not to answer
4. What is your race/ethnicity?
 - a. White/Caucasian
 - b. African American/Black
 - c. Hispanic/Latino/Chicano
 - d. Asian/Pacific Islander
 - e. American Indian/Alaskan Native
 - f. Other (please describe): _____
 - g. Choose not to answer

5. Please Answer the following:

	Yes	No	Do Not Know
Are you a veteran or a spouse eligible for Priority of Service?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you consider yourself to be a student with a disability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a Pell-eligible student? (<i>Federal Grant Awards</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a TAA-eligible student? (<i>Trade Adjustment Assistance Benefits</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Employment Status:
- Employed full-time
 - Employed part-time
 - Currently not working
 - Retired
7. Please indicate the range of your annual household income.
- \$0 - \$24,999
 - \$25,000 - \$49,999
 - \$50,000 - \$74,999
 - \$75,000 - \$99,999
 - \$100,000 - \$149,999
 - More than \$150,000
8. Did you take HLH130 prior to this course?
- Yes (Go to Q9)
 - No (Go to Q10)
9. What semester and year did you take HLH130? (ex. Spring 2013)
- _____
10. Are you a licensed CNA?
- Yes
 - No
11. For the following list of student support services, please indicate both if it was AVAILABLE on your campus and if you personally USED that student service:

	Services Available	Services Used	Do Not Know
Supplemental Instruction in Nursing Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutoring Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math Review	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nursing Retention Instructor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty Office Hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Please rate the extent you agree or disagree that the Nursing program will provide the following from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Preparation for entry into the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase in wages once employed in the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for multiple levels credential/licensure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for networking with local employers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate sound nursing judgment, incorporating theoretical knowledge and clinical reasoning skills, to provide clinically competent nursing care for individuals, families, and communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate the diversity of the individual, family, and community to maintain caring relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employ appropriate communication techniques while functioning as a member of the healthcare team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage care for a group of patients using organization, collaboration, and delegation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate civic professionalism, ethical, and legal standards into nursing practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Please rate the extent you agree or disagree that you have the ability to perform the following tasks on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Apply theoretical knowledge necessary to develop plans of care that address patient needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize components of clinical reasoning that are necessary in the provision of patient care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate nursing care based on principles of safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acknowledge each patient's unique life experiences when providing nursing care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employ therapeutic, respectful, and non-judgmental communication techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify time management and organizational strategies to provide safe and appropriate care in a variety of healthcare settings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply standards of nursing practice to professional behaviors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Please rate the extent you agree or disagree that the Course Orientation provided the necessary information for each of the following topics on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Preparation for the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course Objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Clinical Evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Theory Evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Please rate the extent you agree or disagree with the following aspects of NUR170 on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Class time enhanced my learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Class activities enhanced my learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course assignments reflected course objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exams reflected course objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Please rate the extent you agree or disagree that the following Course Resources supported course content and learning objectives on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Textbook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lecture notes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Readings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additional electronic resources (with textbook)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blackboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ATI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Echo 360 (lecture capture)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please rate the extent you agree or disagree with the following statements on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Faculty was available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty used class time well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty used varied methods of instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Please provide additional comments about the course or instructor:

NUR190 Student Questionnaire

TAACCCT 2 Grant Nursing 190 Course Survey

DTCC Program Components: Accelerated Nursing

- Format:** Quantitative research to collect perceptions regarding program and core competencies, experiences in the program, and future plans.
- Respondents will be recruited via Blackboard by nursing faculty.
- Targets:** Respondents will be individuals enrolled in the NUR190 course.
- Timeline:** Faculty will include a link to the questionnaire on the course Blackboard site in the final weeks of the semester.

1. What is your age?
 - a. Under 18 (go to completion page)
 - b. 18-24 years old
 - c. 25-34 years old
 - d. 35-44 years old
 - e. 45+ years old
 - f. Prefer not to answer
2. Please rate the extent you agree or disagree that the Course Orientation provided the necessary information for each of the following topics on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Preparation for the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course Objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Clinical Evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student Theory Evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Please rate the extent you agree or disagree that the nursing program will provide the following from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Preparation for entry into the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase in wages once employed in the workforce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for multiple levels credential/licensure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunities for networking with local employers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate sound nursing judgment, incorporating theoretical knowledge and clinical reasoning skills, to provide clinically competent nursing care for individuals, families, and communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate the diversity of the individual, family, and community to maintain caring relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employ appropriate communication techniques while functioning as a member of the healthcare team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage care for a group of patients using organization, collaboration, and delegation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate civic professionalism, ethical, and legal standards into nursing practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please rate the extent you agree or disagree that you have the ability to perform the following tasks on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Use theoretical knowledge to develop plans of care that respond to changing patient needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exhibit clinical reasoning skills through the use of the nursing process in the provision of patient care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Practice clinically competent nursing care using evidence-based practice and principles of safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize unique life experiences that influence the care of individuals and families	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discover the impact of therapeutic, respectful, and nonjudgmental communication techniques among members of the healthcare team in the promotion of healthy outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select effective verbal and nonverbal communication techniques to promote optimal patient centered outcomes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply the management principles of organization, interdisciplinary collaboration, and delegation to provide nursing care for patients across the life span	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply the professional standards of nursing practice within the healthcare setting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Please rate the extent you agree or disagree with the following aspects of NUR190 on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Class time enhanced my learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Class activities enhanced my learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course assignments reflected course objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exams reflected course objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Please rate the extent you agree or disagree that the following Course Resources supported course content and learning objectives on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Textbook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lecture notes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Readings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additional electronic resources (with textbook)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blackboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ATI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Echo 360 (lecture capture)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Please rate the extent you agree or disagree with the following statements on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Faculty was available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty used class time well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty used varied methods of instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. For the following list of student support services, please indicate both if it was AVAILABLE on your campus and if you personally USED that student service:

	Services Available	Services Used	Do Not Know
Supplemental Instruction in Nursing Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutoring Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math Review	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nursing Retention Instructor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty Office Hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Please select the campus where you are enrolled in the NUR190 course.
- Dover
 - Georgetown
 - Stanton

10. What is your gender?

- a. Female
- b. Male
- c. Transgender
- d. Prefer not to answer

11. What is your race/ethnicity?

- a. White/Caucasian
- b. African American/Black
- c. Hispanic/Latino/Chicano
- d. Asian/Pacific Islander
- e. American Indian/Alaskan Native
- f. Other (please describe): _____
- g. Prefer not to answer

12. Please Answer the following:

	Yes	No	Do Not Know
Are you a Pell-eligible student? (<i>Federal Grant Awards</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a TAA-eligible student? (<i>Trade Adjustment Assistance Benefits</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a veteran or a spouse eligible for Priority of Service?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you consider yourself to be a student with a disability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Employment Status:

- a. Employed full-time
- b. Employed part-time
- c. Currently not working
- d. Retired

14. Please indicate the range of your annual household income.

- a. \$0 - \$24,999
- b. \$25,000 - \$49,999
- c. \$50,000 - \$74,999
- d. \$75,000 - \$99,999
- e. \$100,000 - \$149,999
- f. More than \$150,000
- g. Prefer not to answer

15. Please provide additional comments about the course or instructor:

Nursing Program Exit Questionnaire

TAACCCT 2 Grant Nursing Program Exit Survey

DTCC Program Components: Accelerated Nursing

Format: Quantitative research to collect perceptions regarding program and core competencies, experiences in the program, and future plans.

Respondents will be recruited via Blackboard by nursing faculty.

Targets: Respondents will be individuals in their last semester of the nursing associate's degree program.

Timeline: Faculty will include a link to the questionnaire on the course Blackboard site in the final weeks of the semester.

1. What is your age?
 - a. Under 18 (go to completion page)
 - b. 18–24 years old
 - c. 25–34 years old
 - d. 35–44 years old
 - e. 45+ years old
 - f. Prefer not to answer
2. Which of the following apply to you? (*Mark all that apply*)
 - a. I passed HLH130 before enrolling in the nursing program (go to Q3)
 - b. I was a Certified Nursing Assistant (CNA) before enrolling in the nursing program (go to Q3)
 - c. I was an LPN prior to enrolling in the nursing program (go to Q5)
 - d. I was a paramedic prior to enrolling in the program (go to Q5)
 - e. None of the above (go to Q5)

3. Please indicate the degree to which you agree or disagree with the following statements from 1–7; where 1 = Strongly Disagree and 7 = Strongly Agree.

	1	2	3	4	5	6	7	Does Not Apply
HLH130 prepared me for the nursing program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am glad I had to become a CNA before enrolling in the nursing program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was able to find work while enrolled in the nursing program because I was a CNA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working as a CNA prior to enrolling in the nursing program was beneficial to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. What was the value of being a CNA prior to enrolling in the nursing program?

5. Were you enrolled in the accelerated program? (*attended classes through the summer*)

- Yes (Go to Q6)
- No (Go to Q12)
- Unsure (Go to Q12)

6. The pace of the accelerated program was...

- too slow
- comfortable
- too fast
- Unsure

7. Was the accelerated program beneficial to you?

- Yes
- No
- Unsure

8. Please explain why or why not:

9. Did the accelerated program meet your expectations?

- Yes
- No
- Unsure

10. Please explain why or why not:

11. If given the choice again, would you choose the accelerated option rather than the traditional program?

- a. Yes
- b. No
- c. Unsure

12. Did you utilize Echo360 (Lecture Capture) while enrolled in the nursing program?

- a. Yes (go to Q13)
- b. No (go to Q15)
- c. Do not know (go to Q15)

13. Was Echo360 beneficial during your time in the program?

- a. Yes
- b. No

14. Please explain why or why not:

15. Please rate the extent to which you agree or disagree with the following statements from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
The program prepared me for a career in nursing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident in my abilities as a nurse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident I will pass my NCLEX license exam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident I will be able to find a nursing job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Please rate the extent you agree or disagree that you have attained the following program graduate competencies on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Integrate sound nursing judgment, incorporating theoretical knowledge and clinical reasoning skills, to provide clinically competent nursing care for individuals, families, and communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate the diversity of the individual, family, and community to maintain caring relationships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employ appropriate communication techniques while functioning as a member of the healthcare team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage care for a group of patients using organization, collaboration, and delegation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate civic professionalism, ethical, and legal standards into nursing practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please rate the extent you agree or disagree that you have developed the following core competencies on a scale from 1-7; where 1 = strongly disagree and 7 = strongly agree.

	1	2	3	4	5	6	7	Do Not Know
Communicate clearly and effectively both orally and in writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate effective problem solving and reasoning skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work effectively in groups of people from diverse backgrounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate ethical and professional understanding and conduct	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply appropriate information literacy skills to locate, evaluate, and use information effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use computer technology appropriate to the field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use scientific and mathematical reasoning appropriate to the technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. What are your future plans once you complete the DTCC nursing program? (*Mark all that apply*)

- a. I have already secured a nursing job (go to Q19)
- b. I will look for a job in the nursing field (go to Q20)
- c. I will continue my education in nursing (go to Q20)
- d. I will continue my education in a field other than nursing (go to Q20)
- e. I will look for a job in a field other than nursing (go to Q20)
- f. I have already secured a job in a field other than nursing (go to Q20)
- g. Other (please describe): _____ (go to Q20)

19. Where have you secured employment?

20. Please select the campus where you are enrolled in the nursing program.

- a. Dover
- b. Georgetown
- c. Stanton

21. What is your gender?

- a. Female
- b. Male
- c. Transgender
- d. Prefer not to answer

22. What is your race/ethnicity?

- a. White/Caucasian
- b. African American/Black
- c. Hispanic/Latino/Chicano
- d. Asian/Pacific Islander
- e. American Indian/Alaskan Native
- f. Other (please describe): _____
- g. Prefer not to answer

23. Please answer the following:

	Yes	No	Do Not Know
Are you a Pell-eligible student? (<i>Federal Grant Awards</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a TAA-eligible student? (<i>Trade Adjustment Assistance Benefits</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you a veteran or a spouse eligible for Priority of Service?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you consider yourself to be a student with a disability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Which of the following best describes your employment status?

- a. Employed full-time
- b. Employed part-time
- c. Currently not working
- d. Retired

25. Please indicate the range of your annual household income.

- a. \$0–\$24,999
- b. \$25,000–\$49,999
- c. \$50,000–\$74,999
- d. \$75,000–\$99,999
- e. \$100,000–\$149,999
- f. More than \$150,000
- g. Prefer not to answer

26. Please provide additional comments about the program:
