Community Christian College Annual Survey Assessment

2022 Graduated Students Survey Analysis and Assessment Report

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TABLE OF CONTENTS

BACKGROUND	3
ANALYSIS SUMMARY	4-10
RECOMMENDATIONS	11-13
ATTACHMENTS	14-17

BACKGROUND

Business Need

As part of the Continuous Performance Improvement Program of the Community Christian College (CCC), and in response to the recommendations made by TRACS (Transnational Association of Christian Colleges and Schools), comparative and quantified analyses of the various surveys, which includes but not limited to CCC's Board of Trustees, staff members, graduated and current students are needed for CCC's assessment. This report contains the overview as well as quantitative and qualitative analysis of the surveys conducted in 2022 for the CCC's Graduated Students/Alumni.

Objective

This report provides overall and specific area analytics as assessments for satisfying the following objectives.

- 1) Provide CCC with the current data analysis and assessment to be utilize and help its Continuous Performance Improvement program to move forward to the next stage of implementing corrective/improvement actions.
- 2) Provide CCC with Graduated Students survey documents to assist in submitting to TRAC per its request.

Scope

Quantitative data analyses using the CCC's Graduated Students survey raw data via the SurveyMonkey program. The analyses will only be based on the raw data provided by CCC, and cover the following areas as its scope:

- Quantitative analysis for the survey conducted in 2022
- Quantitative analysis for the survey conducted in 2022
- Summary
- Recommendations

The following are NOT part of the scope for this report. Should those be included in the scope, further discussion for making an alignment with CCC will be required:

- Risk analysis or mitigation plan
- Corrective/improvement action implementation or execution plans
- Control or maintenance plan
- Project management elements or components

Data Source Used

Welcome to SurveyMonkey!

ANALYSIS SUMMARY

Overview

1. Participation

There are 18 students total that participated in Graduated Students/Alumni survey. The participation rate is yet to be clarified since the total number of students that were invited to the survey is unknown. The 18 students have responded to all 34 questions; no question was skipped or unanswered.

2. Characteristics of Survey Questions

- a) There are thirty four questions total in this survey. The first twenty nine questions (except for questions #20 and #29) are in a format to benchmark how students assessed their own improvements between BEFORE their arrivals at CCC and AFTER the completion of their programs.
- b) The following sixteen areas were the subject matters included in the survey:
 - i. Writing efficiency
 - ii. Verbal communication skill
 - iii. Ability to critically analyzing written information
 - iv. Ability to define and solve problems
 - v. Ability to work and learn independently
 - vi. Ability to work cooperatively in a group
 - vii. Understanding and appreciating to the arts
 - viii. Understanding and application of scientific principles and methods
 - ix. Application of quantitative principles and methods
 - x. Understanding and appreciation of diverse philosophies and cultures
 - xi. Understanding and appreciation of ethnicities and inclusion
 - xii. Understanding of the interaction of society and the environment
 - xiii. Ability to work effectively with modern technology, especially computers
 - xiv. Ability at locating information needed to help make decisions or solve problems
 - xv. Automated data collections through Survey Monkey with visual depictions.
 - xvi. Use of the knowledge, ideas, or perspectives gained from your degree program
- c) The verbiage of questions (questions #8, #10, #12, #16, #24 and #26) to describe "AFTER" state are not consistent. Some are described as "Upon completion" while some are described as "After completing" or "At the time of completion of".
- d) Questions #18 and 19 are duplicated.
- e) Questions #20 and 29 are missing questions to assess "BEFORE" state.

3. Data collection

Automated data collections through Survey Monkey with visual depictions. Typical duration of each module of survey is also available for participants.

Quantitative

1. BEFORE vs. AFTER

- a) The total average for all BEFORE state is 3.7.
- b) The total average for all "AFTER/UPON COMPLETION/AT THE TIME OF COMPLETION" state is 4.4.
- c) Graduated students assessed that they have improved 0.7 in overall in score average after completing their program. This is an improvement of 15.9%.
- d) See Attachment A for Quantitative Score Table and Distribution of Scores
- e) See Attachment B for Quantitative Score Table and Distribution of Scores in %

2. Areas Improved

There are six areas that indicate notable (18.0%+) improvement. See also Attachment C for the Areas Most Improved table.

a) Understanding and appreciating the arts (Q13/Q14)

i. Before: 3.22 ii. After: 4.50

iii. Variance: 1.28 (25.56%+)

iv. Scored the highest in making improvement; the entire students scored either GOOD (4 points) or VERY GOOD (5 points) AFTER the completion of the program.

b) Understanding and applying scientific principles and methods (Q15/Q16)

i. Before: 3.33ii. After: 4.39

iii. Variance: 1.06 (21.11%+)

iv. Scored the second highest in making improvement; BEFORE the students' arrival, the score was far below its average (-9.9% in deviation). However, GOOD (4 points) or VERY GOOD (5 points) AFTER the completion of the program.

c) Writing efficiency (Q1/Q2)

i. Before: 3.61ii. After: 4.56

iii. Variance: 0.94 (18.89%+)

- iv. Great majority (61.1%) of students indicated that their writing efficiency was good before they arrived at CCC. The same exact number of students shifted to VERY GOOD after completing the program.
- v. Before the student's arrival, the score was slightly (0.1 in score) under its average. However, it remarkably improved (1.0) after the completion of program. It is also noteworthy that before the program, 16.7% of students scored VERY POOR (1 point) and POOR (2 point). The vast majority (94.4%) responded GOOD (4 points) or VERY GOOD (5 points) AFTER the completion of the program.

Quantitative (Cont.)

d) Critically analyze written information (Q5/Q6)

vi. Before: 3.72 vii. After: 4.66

viii. Variance: 0.94 (18.89%+)

- ix. Students responded evenly across the scores except GOOD (44.4%) BEFORE the program.

 The entire students responded GOOD (4 points) or VERY GOOD AFTER the completion of the program.
- x. The score contributed to making a transformation from the average to above average in their ability to critically analyze written information.
- e) Work and learn independently (Q9/Q10)

xi. Before: 3.83 xii. After: 4.77

xiii. Variance: 0.94 (18.89%+)

- xiv. Great majority (66.7%) of Graduated Students responded GOOD (4 points) before their arrival to CCC. The entire students have indicated GOOD (4 points) or VERY GOOD (5 points) AFTER the completion of the program.
- xv. The score contributed to improving slightly above average (0.1 in score) to far above average (+1.0 in score) AFTER the completion of their program.
- f) Locate information needed to help make decisions or solve problems? (Q27/Q28)

xvi. Before: 3.72 xvii. After: 4.67

xviii. Variance: 0.94 (18.89%+)

xix. In the BEFORE state, the scores are equally distributed from POOR (1 point) to VERY GOOD (5 points) as the entire scores have shifted to GOOD (4 points) and VERY GOOD upon the completion of the program.

3. Areas of Opportunity

There are four areas that indicate least (< 14.0%+) improvement. See also Attachment D for The areas most improved. See also Attachment D for the Areas of Opportunity table.

a) Verbal communication skill (Q3/Q4)

i. Before: 4.22ii. After: 4.83

iii. Variance: 0.61 (12.22%+)

- iv. Students indicated that their Verbal communication skills were by far (0.5 in score) above the average to begin with. Over a half (55.6%) responded VERY GOOD (5 points) at the time of arrival.
- v. This may not be the highest improved program subject due to the original baseline being significantly high. However, 83.3% responded their communication skills are VERY GOOD (+27.7%) after the completion of the program.

Quantitative (Cont.)

b) Understanding and appreciation of ethnicities and inclusion (Q21/22)

i. Before: 3.83 ii. After: 4.50

iii. Variance: 0.67 (13.33%+)

- iv. This is one of the three questions (see below two questions) indicates the identical data distribution and growth in improvement.
- v. In the BEFORE state, the scores are equally distributed to FAIR (3 points), GOOD (4 points) and VERY GOOD (5 points)
- vi. In the AFTER state, the score in FAIR is drastically decreased (16.6% as the score of VERY GOOD has jumped (27.8%)
- c) Understanding of the interaction of society and the environment (Q23/24)

i. Before: 3.72ii. After: 4.39

iii. Variance: 0.67 (13.33%+)

- iv. This is one of the three questions indicates the identical data distribution and growth in improvement.
- v. In the BEFORE state, the scores are equally distributed to FAIR (3 points), GOOD (4 points) and VERY GOOD (5 points)
- vi. In the UPON the completion state, the score in FAIR is drastically decreased (16.6% as the score VERY GOOD has jumped (33.3%)
- d) Work effectively with modern technology, especially computers (Q25/26)

i. Before: 3.89 ii. After: 4.56

iii. Variance: 0.67 (13.33%+)

- iv. This is one of the three questions (see above two questions) indicates the identical data distribution and growth in improvement.
- v. In the BEFORE state, the scores are equally distributed to FAIR (3 points), GOOD (4 points) and VERY GOOD (5 points)
- vi. In the UPON the completion state, the score in FAIR is drastically decreased (22.2% as the score VERY GOOD has jumped (33.4%)

4. Binary Questions

Below five questions are binary questions and response ratios to assess the current status of the Graduated Students. See also Attachment E for the Binary Question Data Distribution table.

- a) The data indicates that great majority (72.2%) of Graduated Students of CCC transferred to a four-year college/university.
- b) Vast majority (83.3%) of those who transferred to a four-year college/university responded that credits from CCC transferred to their new college/university.
- c) Majority (66.7%) of Graduated Students are currently working.
- d) Almost 80% of respondents responded yes to keeping current on their student loan payments or are their loans properly approved for a delayed payment program.

Qualitative

1. Structure of Questions

The structure of given questions shows the following variables traits; direct, loaded, double-barreled, biased and/or leading questions.

- a) Direct Questions Straight to the point, easy to understand and respond such as below examples:
 - i. "How would you rate your writing efficiency?" (Q1/2)
 - ii. "How would you rate your verbal communication?" (Q3/4)
- b) Loaded Questions Information that requires responders to encounter multiple decision-making points such as below examples:
 - i. "How would you rate your ability to critically analyzing written information?" (Q5/6)
 - ii. "How would you rate your ability to work cooperatively in a group?" (Q11/12)
- c) Double-barreled Questions Require respondents to elect answer that satisfies both or all criteria included in one form of question such as below examples:
 - i. "How would you rate your ability to define and solve problems?" (Q7/8)
 - ii. "How would you rate your ability to work and learn independently?" (Q9 and 10)?
- d) Biased and pre-assumed (leading) questions such as below example:
 - i. "Are you keeping current on your student loan payments or are your loans properly approved for a delayed payment program?"

2. Phenomena of Questions - Most and Least Improved

The following common characteristics were found among the questions that the Graduated Students responded most improved (See also Area Improved)

- a) Non-technical
- b) Cognition-related
- c) Problem-solving elements

On the other hand, the data shows that the following common characteristics were found among the questions that the Graduated Students responded least improved (See Areas of Opportunity).

- a) People-related
- b) Multiple/loaded questions

3. Least Favorably Responded

The following common characteristics are discovered in the questions that students responded less favorably:

a) Unclearly defined

A prime example of this is the question about "understanding of the interaction of society and the environment" (#23 and #24) which does not clearly define the scale of the "society" (global, nation, state, municipal, Christian, virtual, remote, etc.) or if the subject is about the ability to understand how the society and the environment is being

Qualitative (Cont.)

interacted each other or if it is about an ability to understand people (that includes respondents) are interacting with society and the environment.

Another example is the question concerning the "ability to work effectively with modern technology, especially computers" (which is the only technology-related question to the graduated students). Computers come with wide varieties of domains and properties such as hardware, software, programs/applications, programming, webs/internet, designing, etc.

b) Sensitive (and emotional) subject

The words "ethnicities and inclusion" are broad and complex. It could be interpreted in various ways such as race, national origin, creed, religion, socio-economic class, gender, etc. These are also sensitive and delicate areas to assess due to the emotional factors.

4. CCC Strategic Plan

CCC has a clearly defined strategic objectives and goals throughout its program offering. Below is a list of expected outcomes described in the of the CCC 2020-2021 Integrated Assessment Plan yet are not included in the assessment questions for the Graduated Students.

a) Effective Communication

 Learn to communicate effectively when they employ the vocabulary of the subject being studied.

b) Information Competency Skills

- i. Develop information competency skills, when they find and interpret information from text, tables, graphs, maps, and media.
- ii. Develop information competency skills, when they successfully complete a well-rounded liberal arts education.

c) Critical Thinking Skills

- i. Develop critical thinking skills when they evaluate strengths, weaknesses and fallacies of logic in arguments and information.
- ii. Develop critical thinking skills when they construct a persuasive argument that is based on sound reasoning and evidence.
- iii. Develop critical thinking skills when they apply lessons from the past or Learned knowledge and skills to new and varied situations.
- iv. Develop critical thinking skills when they devise and defend a logical hypothesis to explain observed phenomena.

d) Christian Character

- Demonstrated Christian character when they reflect the life of Christ in their attitudes and actions.
- i. Demonstrated Christian character when they exhibit biblical discernment and discretion in decision-making.

Qualitative (Cont.)

- ii. Demonstrated Christian character when they display respect and honor to all people because they are made in the image of God.
- iii. Demonstrated Christian character when they model godly family behavior as mothers/fathers, sons/daughters, sisters/brothers.
- iv. Demonstrated Christian character when they commit themselves to the work of Christ in the world through involvement in a local church.
- v. Demonstrated Christian character when they actively participate in civic, political or social responsibilities in their community.

e) Creative Expression and Self-Awareness

- i. Learn creative expression and self-awareness when they recognize their own strengths and weaknesses and adapt appropriate.
- ii. Learn creative expression and self-awareness when they recognize their own biases and values.
- iii. Learn creative expression and self-awareness when they recognize their Learning style and make adjustments as necessary to improve their ability to receive and process information.
- iv. Learn creative expression and self-awareness when they demonstrate the ability to give and receive constructive feedback.
- v. Learn creative expression and self-awareness when they Develop time-management skills.
- vi. Learn creative expression and self-awareness when they Develop stress management skills and/or other skills to maintain health and wellness.
- vii. Learn creative expression and self-awareness when they set goals and Develop strategies for educational, personal and professional Development.
- viii. Learn creative expression and self-awareness when they set goals and Develop strategies to create balance in their personal and professional lives.
- ix. Learn creative expression and self-awareness when they evaluate diverse artistic works in varied media.
- x. Learn creative expression and self-awareness when they demonstrate creativity in an academic, artistic, or technical field.

f) Effective Social Interaction and Cultural Diversity Skills

- Learn effective social interaction and cultural diversity skills when they work effectively as a leader and/or participant in small group settings.
- **ii.** Learn effective social interaction and cultural diversity skills when they apply biblical principles for conflict resolution.

5. Other

a) No questions to assess possible influence by remote/virtual study environment caused by COVID.

RECOMMENDATIONS

Based on the abovementioned data analysis, the following recommendations have been created.

OVERVIEW

1. Strategic Approach

During the preparation stage, it is highly recommended to verify and validate the following critical areas for benchmarking documentation and achieve purposes prior to the execution of all surveys.

- a) Number of invited students
- b) Number of participants
- c) Dates the assessment survey is conducted, completed, and closed.
- d) Proofread the final product (assessment questions) to avoid duplicated questions, grammatical errors, and ambiguous/unclear expressions.
- e) Maintain consistency in the form of questions (i.e., After vs. Upon vs. At the time of completion)
- f) Develop a robust marketing strategy and execution plan to promote more participation.
- g) Create an official instruction manual/procedure to maintain consistent and accurate process of preparing, conducting, and completing surveys. Be sure to include process for updating, expunging, and sharing the documents.

2. Assessment Question Format and Structure

Questions should be clearly defined, direct, concise, and easy to understand for the participants. Design assessment questionnaire very carefully and avoid the following structures.

- a) Leading questions
- b) Biased questions
- c) Double-barreled questions
- d) Loaded questions

Below are some examples of recommended form of questions:

- a) Instead of "How would you rate your ability to critically analyze written information?" (Q5 and Q6), use a form such as "How would you rate your ability to analyze critical information?"
- b) Instead of "How would you rate your ability to define and solve problems?" (Q7 and 8), use a form "How would you rate your ability to define causes in solving problems?"
- c) Instead of "How would you rate your understanding and appreciation of diverse philosophies and cultures?" (Q20) ask two-fold questions such as
 - i. "How would you rate your understanding of diversity?" and
 - ii. "How would you rate your appreciation of diversity cultures?"

OVERVIEW (Cont.)

- d) Instead of "Are you keeping current on your student loan payments or are your loans properly approved for delayed payment program?", ask two-fold questions such as
 - i. "Are you on a student loan?" and
 - ii. "If yes, are you keeping current on your student loan payments?" then,
 - iii. If the question is about finding out approval status for the delays payment brings value or benefit to CCC. then reword the questions as well to
 - iv. "If no, have your student loans been approved for delayed payments?" or simply ask the students to "Describe what happened after payments were delayed."

3. Make Alignment with CCC's Goals, Objectives, Policies and Plans

Add questions that can critically and positively influence to help move the CCC's Key Performance Indicators (KPI) according to the expected outcomes listed in the Integrated Assessment Plan and Strategic Plan. See Strategic Plan under Qualitative Analysis for the list of questions recommended.

STRENGTHS AND AREAS OF OPPORTUNITY

1. Enhance and Control Strength: From Good To Great

As the CCC Graduated Students assessed the following areas as most improved, enhance and maintain the strengths by conducting below control measures for further improvements:

- a) Review what product, process and/or people has been changed/added during the period that those students attended.
- b) Identify and document best practices.
- c) Replicate the best practices best fit for other areas that may apply, and
- d) Test the replicated model in other areas in small scale to validate if or how it works.
- e) Create strong documents and its control and standardize.

Areas that CCC's strengths reside identified by Graduated Students:

- a) Understanding and appreciating the arts
- b) Understanding and applying scientific principles and methods
- c) Writing efficiency
- d) Critical analysis of written information
- e) Work and learn independently
- f) Locating information needed to help make decisions or solve problems

2. Reinforce and Improve Areas of Opportunity: Move the Needle

As the CCC Graduated Students assessed the following areas as the areas least improved, reinforce and improve the areas by conducting below strategic improvements activities:

STRENGTHS AND AREAS OF OPPORTUNITY (Cont.)

- a) Review what product, process and/or people has been changed/added/extracted during the period that those students attended.
- b) Research what might not have been effective collaboratively with relevant stakeholders and Subject atter Experts (SMEs).
- c) Conduct analysis to find out why they may not have worked effectively.
- d) Develop a plan with countermeasures and activities that eliminates or greatly reduce the negative effects and elements.
- e) Form a team, and execute the plan in a small scale, and test if it/how the plan worked.
- f) Create strong documents and its control and standardize.
- g) Start collecting, reporting, and reviewing benchmarked data and results.

Areas of opportunity reside identified by Graduated Students:

- a) Verbal communication skill
- b) Understanding and appreciation of ethnicities and inclusion
- c) Understanding of the interaction of society and the environment
- d) Work effectively with modern technology, especially computers

3. Add Value-Added Questions

General Questions (per Likert Scale)

- a) Add questions to assess remote/video classes provided for students.
- b) Add year graduated, age, race, and gender of participants.
- c) Add questions to assess conditions/status/environment influences caused by COVID.

Binary questions

- a) Add the following questions to supplement "Did you transfer to a four-year college or university?" .
 - i. "Does not apply to me" or "N/A" where applicable.
 - ii. "If yes, are you continuing the same program you studied at cCc?"
 - iii. Add "If you are not continuing the same program you studied at cCc at the 4-year college, what field of study have you switched to?
 - iv. Add "If you are not continuing the same program you studied at cCc at the 4-year college, please tell us why?"
- b) Add the following questions to supplement "Are you currently working?"
 - i. "Does not apply to me" or "N/A" where applicable.
 - ii. "If yes, are you working in the field related to the program you studied at CCC?"
 - iii. "If you are NOT working in the field related to the program you studied at CCC, what field of industry are you working??
- 4. Add any questions that are relevant and helpful to measure the goals, objectives and expected outcomes listed in the CCC's Integrated Assessment Plan and Strategic Plan as shown below.
 - a) Demonstrate a foundational knowledge of the Scripture
 - b) Demonstrate the ability to effectively communicate in written and oral form.
 - c) Demonstrate analytical reasoning skills with the ability to interpret and integrate knowledge
 - d) Demonstrate the ability to conduct basic research.

Attachments

Attachment A - Quantitative Score Table and Distribution of Scores

Q2 Afte Q3 Befo Afte Q4 com Befo Q5 info	fore you arrived at cCc how would you rate your writing efficiency? ter completing your program at cCc, how would you rate your writing efficiency? fore you arrived at cCc how would you rate your verbal communication skill?	1	-1				Total	
Q3 Before After Q4 com Before Q5 info			2	2	11	2	18	3.6
Q4 com Befo Q5 info	fore you arrived at cCc how would you rate your verbal communication skill?	0	0	1	6	11	18	4.6
Q4 com Befo Q5 info		0	1	4	3	10	18	4.2
Q5 info	ter completing your program of study at cCc how would you rate your verbal							
Q5 info	mmunication skill?	0	0	0	3	15	18	4.8
	fore you arrived at cCc, how would you rate your ability to critically analyzing written							
Afte	formation?	0	3	3	8	4	18	3.7
	ter completing your program of study at cCc, how would you rate your ability to critically							
Q6 anal	alyzing written information?	0	0	0	6		18	4.7
	fore you arrived at cCc, how would you rate your ability to define and solve problems?	0	0	5	12	1	18	3.8
Upo	on completion of your program at cCc, how would you rate your ability to define and							
Q8 solv	ve problems?	0	0	0	7	11	18	4.6
	fore arriving at cCc, how would you rate your ability to work and learn independently?	0	3	0	12	3	18	3.8
Upo	on completion of your program at cCc, how would you rate your ability to work and learn							
Q10 inde	dependently?	0	0	0	4	14	18	4.8
Q11 Befo	fore arriving at cCc, how would you rate your ability to work cooperatively in a group?	0	2	5	5	6	18	3.8
Upo	on completion of your program at cCc, how would you rate your ability to work							
Q12 coop	operatively in a group?	0	0	0	6	12	18	4.7
Q13 Befo	fore arriving at cCc, how would you rate your understanding and appreciating the arts?	1	5	3	7	2	18	3.2
Afte	ter completing your program at cCc, how would you rate your understanding and							
Q14 appr	preciating the arts?	0	0	0	9	9	18	4.5
Befo	fore arriving at cCc, how would you rate your understanding and applying scientific							
Q15 prin	nciples and methods?	1	4	3	8	2	18	3.3
At th	the time of completion of your program at cCc, how would you rate your understanding							
Q16 and	d applying scientific principles and methods?	0	0	0	11	7	18	4.4
Upo	on your arrival at cCc, how would you rate your understanding and your ability to apply							
Q17 quai	antitative principles and methods?	3	1	7	6	1	18	3.1
Afte	ter your completion of your program at cCc, how would you rate your understanding and							
Q18 you	ur ability to apply quantitative principles and methods?	0	0	3	12	3	18	4.0
Afte	ter your completion of your program at cCc, how would you rate your understanding and							
Q19 you	ur ability to apply quantitative principles and methods?	0	0	4	11	3	18	3.9
Afte	ter completion of your program at cCc, how would you rate your understanding and							
Q20 appi	preciation of divers philosophies and cultures?	0	1	3	8	6	18	4.1
Befo	fore you arrival at cCc, how would you rate your understanding and appreciation of							
Q21 ethr	nnicities and inclusion?	0	2	4	7	5	18	3.8
Afte	ter completion of your program at cCc, how would you rate your understanding and							
Q22 appr	preciation of ethnicities and inclusion?	0	0	1	7	10	18	4.5
Befo	fore you arrived at cCc, how would you rate your understanding of the interaction of							
Q23 soci	ciety and the environment?	0	1	6	8	3	18	3.7
Upo	on completion of your program at cCc, how would you rate your understanding of the							
Q24 inte	eraction of society and the environment?	0	0	2	7	9	18	4.4
Befo	fore your arrival at cCc, how would you rate your ability to work effectively with modern							
Q25 tech	chnology, especially computers?	0	2	4	6	6	18	3.9
Upo	on completion of your program at cCc, how would you rate your ability to work							
Q26 effe	ectively with modern technology, especially computers?	0	1	0	5	12	18	4.6
Befo	fore your arrival at cCc, how would you rate your ability at locating information needed to							
Q27 help	lp make decisions or solve problems?	0	2	6	5	5	18	3.7
Upo	on completion of your program at cCc, how would you rate your ability at locating							
Q28 info	formation needed to help make decisions or solve problems?	0	0	0	6	12	18	4.7
Afte	ter graduation, how would you rate your ability to use the knowledge, ideas, or							
Q29 pers	rspectives gained from your degree program?	0	0	0	10	8	18	4.4

Attachment B - Quantitative Score Table and Distribution of Scores in %

#	Question/Description	1 -VERY POOR	2 - POOR	3 - FAIR	4 - GOOD	5 - VERY GOOD	Total Score Average	Variance Against Average (Count)	Variance Against Average (%)	Before vs. After Improvement in Score	Before vs. After Improvement in %		
Q1	Before you arrived at cCc how would you rate your writing efficiency?	5.6%	11.1%	11.1%	61.1%	11.1%	3.6	0.98	-2.4%	0.9	18.9%		
Q2	After completing your program at cCc, how would you rate your writing efficiency?	0.0%	0.0%	5.6%	33.3%	61.1%	4.6	1.04	3.5%	0.9	18.9%		
Q3	Before you arrived at cCc how would you rate your verbal communication skill?	0.0%	5.6%	22.2%	16.7%	55.6%	4.2	1.14	14.1%				
04	After completing your program of study at cCc how would you rate your verbal communication skill?	0.0%	0.0%	0.0%	16.7%	83.3%	4.8	1.10	9.8%	0.6	12.2%		
	Before you arrived at cCc, how would you rate your ability to critically analyzing written												
Q5	information? After completing your program of study at cCc, how would you rate your ability to critically	0.0%	16.7%	16.7%	44.4%	22.2%	3.7	1.01	0.6%	0.9	18.9%		
Q6	analyzing written information?	0.0%	0.0%	0.0%	33.3%	66.7%	4.7	1.06	6.1%				
-	Before you arrived at cCc, how would you rate your ability to define and solve problems?	0.0%	0.0%	27.8%	66.7%	5.6%	3.8		2.1%				
ų,	Upon completion of your program at cCc, how would you rate your ability to define and	0.070	0.070	27.070	00.770	3.070	3.0	1.02	2.1/0	0.8	16.7%		
Q8	solve problems?	0.0%	0.0%	0.0%	38.9%	61.1%	4.6	1.05	4.8%	0.0	10.776		
	Before arriving at cCc, how would you rate your ability to work and learn independently?	0.0%	16.7%	0.0%	66.7%		3.8		3.6%				
ŲЭ	Upon completion of your program at cCc, how would you rate your ability to work and learn	0.0%	10.776	0.076	00.776	10.7/6	3.0	1.04	3.0/0	0.9	18.9%		
Q10	independently?	0.0%	0.0%	0.0%	22.2%	77.8%	4.8	1.09	8.6%	0.9	10.3%		
Q11	Before arriving at cCc, how would you rate your ability to work cooperatively in a group?	0.0%	11.1%	27.8%	27.8%	33.3%	3.8	1.04	3.6%				
	Upon completion of your program at cCc, how would you rate your ability to work									0.8	16.7%		
Q12	cooperatively in a group?	0.0%	0.0%	0.0%	33.3%	66.7%	4.7		6.1%				
Q13	Before arriving at cCc, how would you rate your understanding and appreciating the arts?	5.6%	27.8%	16.7%	38.9%	11.1%	3.2	0.87	-12.9%				
	After completing your program at cCc, how would you rate your understanding and									1.3	25.6%		
_	appreciating the arts?	0.0%	0.0%	0.0%	50.0%	50.0%	4.5	1.02	2.3%				
	Before arriving at cCc, how would you rate your understanding and applying scientific												
Q15	principles and methods?	5.6%	22.2%	16.7%	44.4%	11.1%	3.3	0.90	-9.9%	1.1	21.1%		
	At the time of completion of your program at cCc, how would you rate your understanding										2212/0		
Q16	and applying scientific principles and methods?	0.0%	0.0%	0.0%	61.1%	38.9%	4.4	1.00	-0.3%				
	Upon your arrival at cCc, how would you rate your understanding and your ability to apply												
Q17	quantitative principles and methods?	16.7%	5.6%	38.9%	33.3%	5.6%	3.1	0.69	-30.6%				
	After your completion of your program at cCc, how would you rate your understanding and										_		
Q18	your ability to apply quantitative principles and methods?	0.0%	0.0%	16.7%	66.7%	16.7%	4.0	0.91	-9.1%				
	After your completion of your program at cCc, how would you rate your understanding and												
Q19	your ability to apply quantitative principles and methods?	0.0%	0.0%	22.2%	61.1%	16.7%	3.9	0.90	-10.4%				
	After completion of your program at cCc, how would you rate your understanding and									_	-		
Q20	appreciation of divers philosophies and cultures?	0.0%	5.6%	16.7%	44.4%	33.3%	4.1	0.92	-7.8%				
	Before you arrival at cCc, how would you rate your understanding and appreciation of												
Q21	ethnicities and inclusion?	0.0%	11.1%	22.2%	38.9%	27.8%	3.8	1.04	3.6%	0.7	13.3%		
	After completion of your program at cCc, how would you rate your understanding and												
Q22	appreciation of ethnicities and inclusion?	0.0%	0.0%	5.6%	38.9%	55.6%	4.5	1.02	2.3%				
	Before you arrived at cCc, how would you rate your understanding of the interaction of												
Q23	society and the environment?	0.0%	5.6%	33.3%	44.4%	16.7%	3.7	1.01	0.6%	0.7	13.3%		
	Upon completion of your program at cCc, how would you rate your understanding of the												
Q24	interaction of society and the environment?	0.0%	0.0%	11.1%	38.9%	50.0%	4.4	1.00	-0.3%				
	Before your arrival at cCc, how would you rate your ability to work effectively with modern												
Q25	technology, especially computers?	0.0%	11.1%	22.2%	33.3%	33.3%	3.9	1.05	5.1%	0.7	13.3%		
ا ا	Upon completion of your program at cCc, how would you rate your ability to work												
Q26	effectively with modern technology, especially computers?	0.0%	5.6%	0.0%	27.8%	66.7%	4.6	1.04	3.5%				
l l	Before your arrival at cCc, how would you rate your ability at locating information needed to								_	,			
Q27	help make decisions or solve problems?	0.0%	11.1%	33.3%	27.8%	27.8%	3.7	1.01	0.6%	0.9	18.9%		
ا ا	Upon completion of your program at cCc, how would you rate your ability at locating												
Q28	information needed to help make decisions or solve problems?	0.0%	0.0%	0.0%	33.3%	66.7%	4.7	1.06	6.1%				
020	After graduation, how would you rate your ability to use the knowledge, ideas, or		0.000	0.007	FF 501	44 ***			4 ~~/		-		
Q29	perspectives gained from your degree program?	0.0%	0.0%	0.0%	55.6%	44.4%	4.4	1.01	1.0%				

#	Question/Description	Score Average	Variance Against Total Average	Variance Against Category Average	Before vs. After Improvement in Score	Before vs. After Improvement in %
Q13	Before arriving at cCc, how would you rate your understanding and appreciating the arts?	3.22	0.87	-12.9%	1.28	25.56%
Q14	After completing your program at cCc, how would you rate your understanding and appreciating the arts?	4.50	1.02	2.3%		
Q15	Before arriving at cCc, how would you rate your understanding and applying scientific principles and methods?	3.33	0.90	-9.9%	1.06	21.11%
Q16	At the time of completion of your program at cCc, how would you rate your understanding and applying scientific principles and methods?	4.39	1.00	-0.3%		21.11%
	Before you arrived at cCc how would you rate your writing efficiency? After completing your program at cCc, how would you rate your writing efficiency?	3.61 4.56		-2.4% 3.5%	0.54	18.89%
	Before you arrived at cCc, how would you rate your ability to critically analyzing written information?	3.72		0.6%		18.89%
Q6	After completing your program of study at cCc, how would you rate your ability to critically analyzing written information?	4.67	1.06	6.1%		
Q9	Before arriving at cCc, how would you rate your ability to work and learn independently?	3.83	1.04	3.6%	0.94	18.89%
Q10	Upon completion of your program at cCc, how would you rate your ability to work and learn independently?	4.78	1.09	8.6%		
Q27	Before your arrival at cCc, how would you rate your ability at locating information needed to help make decisions or solve problems?	3.72	1.01	0.6%	0.94	18.89%
Q28	Upon completion of your program at cCc, how would you rate your ability at locating information needed to help make decisions or solve problems?	4.67	1.06	6.1%		

Attachment D - The Areas of Opportunity

#	Question/Description	Total Score Average	Variance Against Total Average	Variance Against Category Average	Before vs. After Improvement in Score	Before vs. After Improvement in %
Q3	Before you arrived at cCc how would you rate your verbal communication skill?					
		4.22	1.14	14.1%	0.61	12.22%
Q4	After completing your program of study at cCc how would you rate your verbal communication skill?				3.02	12.22/0
		4.83	1.10	9.8%		
	Before you arrival at cCc, how would you rate your understanding and appreciation of ethnicities and inclusion?					
		3.83	1.04	3.6%	0.67	13.33%
Q22	After completion of your program at cCc, how would you rate your understanding and appreciation of ethnicities and inclusion?					15.5370
		4.50	1.02	2.3%		
	Before you arrived at cCc, how would you rate your understanding of the interaction of society and the environment?					
		3.72	1.01	0.6%	0.67	13.33%
Q24	Upon completion of your program at cCc, how would you rate your understanding of the interaction of society and the environment?				0.07	13.33/6
		4.39	1.00	-0.3%		
	Before your arrival at cCc, how would you rate your ability to work effectively with modern technology, especially computers?					
		3.89	1.05	5.1%	0.67	13.33%
Q26	Upon completion of your program at cCc, how would you rate your ability to work effectively with modern technology, especially computers?				0.67	13.33%
		4.56	1.04	3.5%		

Attachment E - Binary Questions and Data Distribution

#	Question/Description	YES	NO
Q30	Did you transfer to a four-year college or university?	72.2%	27.8%
	If you did not transfer, do you intend to transfer to a four-year college or university in the		
Q31	near future?	83.3%	16.7%
Q32	Did any of your credits from cCc transfer to your new college or university?	83.3%	16.7%
Q33	Are you currently working?	66.7%	33.3%
	Are you keeping current on your student loan payments or are your loans properly		
Q34	approved for a delayed payment program?	77.8%	22.2%