

Program Completers' Perceptions of Learning Outcomes and Learning Support: 2015

Collin College

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Table of Contents

<i>Executive Summary</i>	<i>iviv</i>
Introduction	1
Instrument	1
Participants	3
Data Analysis	4
Section I: Respondent Background Information	6
Section II: Perceptions of Learning Outcomes.....	8
Section III: Perceptions of Learning Outcomes by Demographic and Completer Background Variables	30
Perceptions of Learning Outcomes by Age	30
Perceptions of Learning Outcomes by Gender	31
Perceptions of Learning Outcomes by Ethnicity	32
Perceptions of Learning Outcomes by Race	33
Perceptions of Learning Outcomes by Highest Award Received	34
Perceptions of Learning Outcomes by Completion Year	35
Section IV: Exploratory Factor Analysis of Survey Items	36
Section V: Perceptions of Learning Support.....	40
Summary	42
APPENDIX A: List of Learning Support Activities and Services Added by Survey Respondents	45
APPENDIX B: Questionnaire	50

List of Figures

Figure 1. Importance of and Satisfaction with Aspects of Learning Support – Mean Responses.....	41
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List of Tables

Table 1. <i>Respondents Demographic Profile and Collin Completers Profile</i>	6
Table 2. <i>Award Received</i>	7
Table 3. <i>Highest Degree Award Year</i>	7
Table 4. <i>Perceptions of Learning Outcomes: Degree Qualification - Specialized Knowledge Subscale</i> ...	10
Table 5. <i>Perceptions of Learning Outcomes: Degree Qualification - Broad Integrative Knowledge Subscale</i>	11
Table 6. <i>Perceptions of Learning Outcomes: Degree Qualification - Intellectual Skills Subscale</i>	12
Table 7. <i>Perceptions of Learning Outcomes: Degree Qualification – Applied Learning Subscale</i>	13
Table 8. <i>Perceptions of Learning Outcomes: Degree Qualification – Civic Learning Subscale</i>	14
Table 9. <i>Perceptions of Learning Outcomes: Texas Core Objective – Communication Skills Subscale</i> ...	15
Table 10. <i>Perceptions of Learning Outcomes: Texas Core Objective – Critical Thinking Skills Subscale</i> ...	16
Table 11. <i>Perceptions of Learning Outcomes: Texas Core Objective – Empirical and Qualitative Skills Subscale</i>	17
Table 12. <i>Perceptions of Learning Outcomes: Texas Core Objective – Personal Responsibilities Subscale</i>	18
Table 13. <i>Perceptions of Learning Outcomes: Texas Core Objective – Social Responsibilities Subscale</i>	19
Table 14. <i>Perceptions of Learning Outcomes: Texas Core Objective – Teamwork Subscale</i>	20
Table 15. <i>Perceptions of Learning Outcomes: SCANS – Basic Skills Subscale</i>	21
Table 16. <i>Perceptions of Learning Outcomes: SCANS – Personal Qualities Subscale</i>	22
Table 17. <i>Perceptions of Learning Outcomes: SCANS – Thinking Skills Subscale</i>	23
Table 18. <i>Perceptions of Learning Outcomes: SCANS – Information Subscale</i>	24
Table 19. <i>Perceptions of Learning Outcomes: SCANS – Interpersonal Subscale</i>	25
Table 20. <i>Perceptions of Learning Outcomes: SCANS – Resources Subscale</i>	26
Table 21. <i>Perceptions of Learning Outcomes: SCANS – Technology Subscale</i>	27
Table 22. <i>Perceptions of Learning Outcomes: Overall Workforce Preparation</i>	28
Table 23. <i>Internal Reliability Comparison Between Survey Administrations</i>	29
Table 24. <i>Perception of Learning Outcomes by Age</i>	30
Table 25. <i>Perception of Learning Outcomes by Gender</i>	31
Table 26. <i>Perception of Learning Outcomes by Ethnicity</i>	32
Table 27. <i>Perception of Learning Outcomes by Race</i>	33
Table 28. <i>Perception of Learning Outcomes by Highest Award</i>	34
Table 29. <i>Perception of Learning Outcomes by Highest Award Completion Year</i>	35
Table 30. <i>Factor Matrix for Eight (8) Green Items – Items Presented to All Completers</i>	36
Table 31. <i>Rotated Factor Matrix for 25 Blue Items – Items Presented to AAS/AAT/Certificate Completers</i>	37
Table 32. <i>Factor Matrix for 15 Red Items – Items Presented to Any Associates or Core Completers</i>	38
Table 33. <i>Factor Matrix for 10 Brown Items – Items Presented to AA/AS or Core Completers</i>	39

Executive Summary

This report summarizes the results of a pilot test of the revised Completer Follow-Up Survey conducted in fall 2015 by Collin College's Institutional Research Office (IRO). The pilot survey was administered online to 6,650 Collin College certificate, associate degree, and core curriculum completers (henceforth referred to as program completers) of academic years 2014 and 2015 using the Qualtrics survey tool. The survey instrument used in this pilot survey was developed by a subcommittee of the North Texas Community College Consortium's (NTCCC) Research and Institutional Effectiveness Committee (RIEC) in 2015. The goals of the subcommittee's survey development project included:

- Determine students' perceptions of their own learning outcomes
- Collect feedback regarding students' perceptions of an institution's learning support environment
- Provide institutions with opportunities to benchmark against one another
- Allow some degree of customization to the instrument to address individual institutional needs
- Online survey administration

The subcommittee developed the survey based on the areas of learning from the Lumina Foundation's Degree Qualifications Profile that were deemed appropriate for an associate degree-granting institution, the U.S. Department of Education SCANS skills, and the Texas Higher Education Coordinating Board's core objectives.

Five hundred and eighty-nine program completers responded to the survey, yielding a valid overall response rate of 9 percent. Sixty-four percent of the responses came from the 2015 academic year program completers. Questionnaires were sent only to completers who had valid email addresses in Collin College's Banner Student System. Many of the completers had earned multiple awards; Sixty-six percent had earned associate degrees, 62 percent were core curriculum completers, and 28 percent had earned certificates.

Program completers' perceptions were measured to assess their perceptions of the degree to which their learning experiences at Collin College contributed to developing or strengthening their knowledge, skills, or abilities related to 58 areas of learning. Scales ranged from 1 to 4, where level 1 meant the learning experience had no effect on their knowledge, skills, or abilities and 4 meant that the learning experience had greatly developed or strengthened their knowledge, skills, or abilities.

The majority of the program completers believed that their learning experience at Collin College had to some extent or greatly (levels 3 or 4) developed or strengthened their knowledge, skills, or abilities related to the learning outcomes identified in the pilot survey. Expected learning outcomes with the highest mean scores (i.e., most positive perceptions) included:

- Define and properly use the current terminology in my major field of study. (Mean = 3.5)

- Demonstrate proficiency in the use of tools, technologies, and methods within my major field of study. (3.4)
- Appropriately cite multiple information sources from different media in projects, papers, or presentations. (3.4)
- Explain the scope and principal features of my major field of study including theories and practices. (3.4)

Expected learning outcomes with the lowest mean scores (i.e., least positive perceptions) included:

- Maintain and troubleshoot equipment. (Mean = 2.7)
- Prepare and use budgets, make forecasts, keep records, and make adjustments to meet objectives. (2.9)
- Effective negotiation skills. (3.0)
- Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained. (3.0)
- Collaborate in developing and implementing an approach to a civic issue. (3.0)
- Acquire, store, allocate, and use materials and space efficiently. (3.0)

The areas of learning outcomes were sub-divided into 20 subscales. The number of items included in each subscale ranged from 1 to 11. Reliability (internal consistency) analysis of the subscales indicated that all the subscales had good or excellent internal reliability, as measured by the Cronbach's alpha.

Responses varied by age for items related to research, deduction, critical-thinking and reasoning skills. Differences based on gender were found to be significant in several areas such as teamwork, collaboration, communication, critical thinking, problem-solving, specialized knowledge, intellectual skills, personal management, personal responsibility and civic learning. Hispanic and non-Hispanic completers differed in terms of the highest award received (degree vs. core completion vs. certificate) and in their perceptions of learning gains in written and visual communication and written and oral communication skills. Racial groups were statistically different in their perceptions of learning gains in teamwork, visual communication, critical thinking, reasoning and intellectual skills, and the ability to apply learning to a variety of situations. The skill sets where significant differences were found based on highest award year, were workplace preparation skills, critical thinking skills, social skills and ability to apply knowledge.

In addition to the 58 areas of learning, perceptions about the importance of 33 aspects of student support were also measured. Dual scales were used to elicit feedback about students' satisfaction with various aspects of student support and to determine how important they found the 33 aspects of student support. Satisfaction was measured using a five-point scale ranging from 1 (very dissatisfied) to 5 (very satisfied), and importance was measured using a five-point scale ranging from 1 (not very important) to 5 (very important).

Program completers found overall classroom instructional quality, registration for classes, campus safety and security, academic advising- accuracy of information, admission to the college, academic advising service quality, quality of online services, college web site navigation, and access to online services were found to be the most important aspects of

student support, whereas bookstore, student organizations, and student activities/student life were found to be the least important.

Students indicated that they were most satisfied with college buildings and facilities, library services quality, library resource availability, access to online services, campus safety and security, and computer labs. They were least satisfied with career counselling help with job placement, career counselling service quality, and academic advising information accuracy.

Differences between students' perceptions of the importance of given student support services and their levels of satisfaction with those same support services sometimes resulted in gaps between importance and satisfaction. The largest gaps between perceived importance and satisfaction occurred in the following student support activities and services;

- academic advising service quality,
- academic advising information accuracy, and
- career counselling help with job placement.

The smallest gaps occurred in the following student support activities and services.

- college buildings and facilities,
- library resource availability,
- library service quality,
- student activities/student life,
- student organizations, and
- computer labs.

Although program completers believed that Collin College is doing well in many of the areas of learning outcomes and student support, there are still areas that could benefit from more attention to meet the students' expectations.

The findings of this pilot survey should be interpreted in light of some project limits. The 2015 survey was administered very close to the holiday season, consequently resulting in unexpectedly low response rates. Repeated (6) reminders boosted responses but may have contributed to survey fatigue and measurement errors. For future administrations of the survey it is advisable to launch the survey earlier to circumvent this problem. In addition, simplifying the language of some of the items may also be explored as some potential respondents expressed frustration with the survey's language complexity.

Program Completers' Perceptions of Learning Outcomes and Learning Support: 2015

Introduction

This report summarizes the results of a pilot test of the second revision of a new Completer Follow-Up Survey conducted in fall 2015 by Collin College's Institutional Research Office (IRO). The survey was designed to elicit feedback from Collin program completers about how much their learning experiences at Collin College had contributed to developing or strengthening their knowledge, skills, or abilities in various areas of learning.

The survey was first developed by a subcommittee of the North Texas Community College Consortium (NTCCC) in 2012 in response to a dearth of commercially available measurement tools specifically designed for community colleges that accommodate effective benchmarking and focus on students' perceptions of important learning outcomes.

The key goals of this program completer survey included:

- Provide institutions with opportunity to benchmark against one another,
- Focus on students' perceptions of their own learning outcomes,
- Provide feedback to institutions related to perceptions of an institution's learning support environment,
- Allow some degree of customization on the instrument to address individual institutional needs, and
- Make online administration the primary mode of delivery.

The pilot test of the initial draft in 2013 revealed that the survey was too long and that some items needed to be reworded. Furthermore, a new edition of the Lumina Foundation's Degree Qualifications Profile (DQP), a major source for the survey, was released in 2014. This necessitated major revision to the survey. The new version of the Program Completer Survey was developed in 2015 by the sub-committee of the NTCCC. This second edition of the Program Completer Follow-Up survey was piloted online in fall 2015 using the Qualtrics survey platform. All certificate, associate degree, and core curriculum completers (henceforth referred to as program completers) of academic years 2014 and 2015 who had valid email addresses received an email invitation describing the study and including a link to the survey. Six reminders were sent to the participants who had not yet responded before the survey was closed in February.

Instrument

The instrument has two sections: "Perceptions of Learning Outcomes" and "Perceptions of Learning Support." The items (indicators) used in both sections came from different sources. A total of 58 items (against 76 used in the 2013 pilot) were included in the Perceptions of Learning Outcomes section. In this section, participants were asked to share their perceptions about how much their experiences at Collin College contributed to developing or strengthening their knowledge, skills, or abilities in several areas of learning using four-point semantic

differential-type scales ranging from 1 (had no effect on my knowledge, skills, or abilities in this area) to 4 (greatly developed or strengthened my knowledge, skills, or abilities in this area). With the exceptions of those who concurrently completed AAS degrees and core curriculum, or who concurrently completed certificates and core, no one was asked to respond to all of the 58 items. Based on completers' awards, they were asked to respond to items as follows:

- 8 items were appropriate for students who completed any program,
- 15 items were appropriate for those who completed any associate degree or core curriculum,
- 10 items were appropriate for those who completed Associate of Arts (AA) or Associate of Science (AS) degrees or the core curriculum, and
- 25 items were appropriate for those who completed Associate of Applied Science (AAS) degree or certificate.

Three major sources used as bases for developing the items (indicators) included in the expected general education learning outcomes: the new edition of Lumina Foundation's Degree Qualifications Profile (DQP), Texas' Core Objectives, and The U.S. Department of Education's SCANS skills related to workforce education. The single item measuring general workforce education outcomes, was introduced by the NTCCC subcommittee in 2013 and was retained in 2015.

With several items appearing on more than one subscale, the items were grouped into the following subscales:

Degree Qualifications Profile (DQP) for Expected General Education Learning Outcomes (5 subscales)

DQP describes what students should know and be able to do with an associate's, bachelor's, or master's degree.

1. Specialized Knowledge (SK): 4 items
2. Broad, Integrative Knowledge (BIK): 4 items
3. Intellectual Skills (IS): 11 items
4. Applied and Collaborative Learning (ACL): 5 items
5. Civic and Global Learning (CGL): 4 items

Texas Core Objectives for General Education Learning Outcomes: 6 subscales

1. Communication Skills (CS): 5 items
2. Critical Thinking Skills (CTS): 2 items
3. Empirical & Quantitative Skills (EQS): 9 items
4. Personal Responsibility (PR): 2 items
5. Social Responsibility (SR): 6 items
6. Teamwork (TW): 4 items

SCANS for workforce education outcomes: 9 subscales

1. Foundations:
 - i) Basic Skills (BS): 5 items
 - ii) Personal Qualities (PQ): 5 items
 - iii) Thinking Skills (TS): 7 items

2. Workplace Competencies
 - i) Information (INF): 2 items
 - ii) Interpersonal (INT): 8 items
 - iii) Resources (R): 3 items
 - iv) Technology (T): 3 items

The Perceptions of Learning Support section included 33 items. Sources used for the items (indicators) in this section were interviews with and feedback from student development/ student support professionals. All participants were asked to share their perception on the importance of and their satisfaction with these 33 aspects of student support. Perceptions of satisfaction were measured using a five-point semantic differential-type scale ranging from 1 (very dissatisfied) to 5 (very satisfied), while perceptions of importance ranged from 1 (not important at all) to 5 (very important). Completers were asked to leave the satisfaction scale blank and select a value of 6 on the importance scale if they had no experience with a given aspect of the student support. Ten blank items were provided at the end of the section to allow for students to add any aspects of student support that were important to them but were not included among the 33 items in the section. See Appendix B for the survey instrument.

Participants

A total of 6,650 questionnaires were distributed to students who had completed academic programs during the 2014 and 2015 academic years for whom valid email addresses were available. The first survey invitation was sent out in late November and was followed by six reminders. The unusually large number of reminders were sent out for two reasons. First, the initial plan was to begin survey administration during early November. However, it was delayed until late November, thus coinciding with the holiday season. The holiday season typically affects response rates negatively and this survey was no exception; only 257 responses were received by early January. Second, as the survey is customized to each respondent based on his or her award completion, each section results in varying response sizes. In order to reach the minimum number of responses required to generalize findings with 95% confidence and, at most, a 5% margin of error for each section, a larger overall response rate was required.

By the end of the survey period in mid-February, a total of 587 valid responses were collected resulting in a response rate of nearly 9 percent, almost exactly the same as the first pilot test carried out two years ago. A total of 212 responses (36 percent) were received from 2014 program completers and 375 responses (64 percent) were received from 2015 program completers. This nearly mirrored the results of the 2013 pilot where 35 percent of responses were from 2012 completers and 65 percent from 2013 completers.

Assuming a representative sample, the overall response rate allows for generalizations to the population of all program completers with 95 percent confidence plus or minus 4 percent. Since survey response is based on completer type, the response rates differed from item to item. The numbers of responses (response rates) for section I (Perceptions of Learning Outcomes) were as follows:

- 587 (8.9%) for items which were appropriate for any completer,
- 507 (8.6%) for items which were appropriate for associates degree and core completers,
- 397 (7.7%) for items which were appropriate for AA, AS, or core completers, and
- 232 (12.0%) for items which were appropriate for AAS or Certificate completers.

The minimum sample sizes required for 95% confidence levels with a 5% margin of error were:

- 364 for items which were appropriate for all completers,
- 361 for items which were appropriate for associates degree and core completers,
- 358 for items which were appropriate for AA, AS, or core completers, and
- 321 for items which were appropriate for AAS or Certificate completers.

With the exception of the items appropriate for AAS or certificate completers, the number of responses to all items exceeded the minimum required for 95% confidence level with 5% margin of error. Given the response rates listed above, the margin of errors ranged from 3.9 for items which were appropriate for all completers to 6.0 for items which were appropriate for AAS or certificate completers.

The response rates for the Perceptions of Learning Support section also differed from item to item. Some respondents left satisfaction scales blank, selected option 6 (“had no experience”), and responded to the importance scales only. The number of respondents to the satisfaction scales ranged from 178 to 440 and for importance scales ranged from 245 to 389 respectively. The minimum sample size required for 95% confidence level with 5% margin of error for this section was 364. Consequently, the margins of error for the Perceptions of Learning Support section varied from item to item. The open-ended section where completers were requested to specify support areas that were not included in the previous question resulted in 145 responses. The completers were required to indicate importance and satisfaction with each of the learning support area that were not listed in the previous question. However a large majority of the completers either reproduced the same support areas that were already specified in the previous question, or wrote comments in the space provided. The results produced too wide an array of options to be analyzed meaningfully and therefore, have only been compiled as a listing in Appendix Table A.

Data Analysis

Data for the survey was collected using Qualtrics, a professional online survey administration platform. After downloading the data from Qualtrics, Microsoft Excel Spreadsheet and SPSS were used for analysis.

The Qualtrics survey tool was selected for this survey for its wide range of features and its collaborative design which provides an ability to share the questionnaire with colleagues at other institutions within the North Texas Community College Consortium.

Results

This report presents the data generated by Collin College program completers and core curriculum completers with regard to their perceptions of:

- the contribution of their experience at Collin College in developing or strengthening their knowledge, skills, or abilities related to 58 indicators of expected learning outcomes, and
- the importance of and satisfaction with learning support activities and services.

The report is divided into five sections. Section I summarizes the background information of the participants in the pilot survey (Tables 1-3). Section II summarizes perceptions of expected learning outcomes measures categorized under their respective subscales (Tables 4-22). Besides presenting means and standard deviations for each item, Tables 4 through 22 also present Cronbach's alpha coefficients to indicate reliability (internal consistency) of items within each subscale. Table 23 of Section II presents a comparison between Cronbach's alpha coefficients for the survey administration in 2013 and the one in 2015.

Section III includes tables 24 through 29 which present results of one-way analysis of variance (ANOVA) tests where there were significant differences among group means within each of the demographic and completer profile variables across perceptions of learning. The tables present only those items where statistically significant differences were found among group means based on the completer background variables of age, gender, ethnicity, race, highest award, and year of graduation. Section IV presents the results of exploratory factor analysis of survey items to identify the underlying latent variables within each subscale of the survey instrument.

Section V summarizes the data related to perceptions of learning support. In this section, the mean scores for level of importance, level of satisfaction, and gap between importance and satisfaction are presented for each aspect of student support activities and services. The items are presented in the order of importance to show which items matter most to the program completers. The performance gap for each item identifies areas of learning support where the college is performing well and areas where improvements can be made.

Section I: Respondent Background Information

Table 1 presents a demographic profile of the survey respondents in comparison with the overall completer population. All student background data was acquired from Collin College's Banner system. The comparison underscores some variables where the sample data over- or under-represents specific student attributes. Most note-worthy is the age variable where the 18-22 and 23-29 age categories were considerably underrepresented in the sample, and the 41-54 year category that was over-represented. Female representation in the sample was four percentage points higher than the population, and respondents who identified themselves as white were somewhat underrepresented compared to almost all other race categories which were either proportional in representation or were over-represented relative to whites.

Table 1.

Respondents Demographic Profile and Collin Completers Profile

	Survey Sample		Completers Profile	
	Frequency	Percent	Frequency	Percent
<i>Age Categories</i>				
17 years and younger	0	0%	0	0%
18-22 years	111	19%	1,910	29%
23-29 years	135	23%	2,587	39%
30-35 years	83	14%	818	12%
36-40 years	62	11%	438	7%
41-54 years	156	27%	732	11%
55 years or older	40	7%	165	2%
Total	587	100%	6,650	100%
<i>Gender</i>				
Female	372	63%	3,894	59%
Male	215	37%	2,756	41%
Total	587	100%	6,650	100%
<i>Ethnicity</i>				
Non-Hispanic	477	81%	5,347	80%
Hispanic	99	17%	1,178	18%
Not Reported or unknown	11	2%	125	2%
Total	587	100%	6,650	100%
<i>Race</i>				
American Indian or Alaska Native	5	1%	50	1%
Asian	71	12%	661	10%
Black	102	17%	678	10%
Multiracial	25	4%	252	4%
Native Hawaiian or Other Pacific Islander	2	0%	18	0%
White	327	56%	4,338	65%
Not Reported or unknown	55	9%	653	10%
Total	587	100%	6,650	100%

Table 2 presents awards received by completers in the sample and the population. The comparison indicates that AA/AS and Core completers were underrepresented in the sample whereas AAS/AAT and Certificate completers were overrepresented.

Table 2.

Award Received

	Survey Sample		Completers Profile	
	Frequency	Percent	Frequency	Percent
AA/AS/AAT	264	45%	3,486	52%
AAS	120	20%	840	13%
Core	363	62%	4,586	69%
Certificate	164	28%	1,424	21%

Note. Several completers had earned multiple awards therefore column totals do not accurately reflect the sample or population aggregates. The associated percentages have been calculated out of the total number of survey respondents and the total number of completers in the original sample respectively.

Table 3 presents data based on the year in which the completers received the highest awards. In the cases where the completers received multiple awards, the highest award was assigned based on the following order rubric:

1. AA/AS
2. AAT
3. AAS
4. Core
5. Certificate

The order was developed based on number of credit hours required to achieve completion at Collin. Sixty-four percent of the respondents had completed their highest award in 2015 in contrast with 56 percent of the population. Table 3 indicates that 2015 completers were disproportionately higher in representation in the sample compared to the 2014 completers.

Table 3.

Highest Degree Award Year

	Survey Sample		Completers Profile	
	Frequency	Percent	Frequency	Percent
2014	212	36%	2,920	44%
2015	375	64%	3,730	56%
Total	587	100%	6,650	100%

Section II: Perceptions of Learning Outcomes

This section summarizes data for 58 learning outcome indicators which are divided into 19 subscales. Completers were asked to share their perceptions about how much their learning experiences at Collin College had contributed to developing or strengthening their knowledge, skills, or abilities in various areas of learning using a four-point semantic differential-type scale where 1 represents “had no effect on my knowledge, skills, or abilities in this area” and 4 represents “greatly developed or strengthened my knowledge, skills, or abilities in this area.” The tables presented in this section show counts, percentages, means, standard deviations and Cronbach’s Alpha scores for each item. Cronbach’s Alpha is a reliability score that reflects internal consistency of each subscale. The items are also color-coded to indicate which of the completer groups were required to answer them. Green items were presented to all completers, blue were presented to AAS or certificate completers, red were presented to any associates degree or core completers and brown were presented to AA, AAT, or AS degree or any Core completers.

In general, the majority of the respondents positively rated the impact of their learning experiences at Collin College on their knowledge, skills or abilities in all learning areas. Students indicated that their knowledge, skills, or abilities in the following learning areas had been developed or strengthened the most due to their learning experience at Collin College.

- Define and properly use the current terminology in my major field of study. (\bar{x} =3.5)
- Demonstrate proficiency in the use of tools, technologies, and methods within my major field of study. (\bar{x} =3.4)
- Appropriately cite multiple information sources from different media in projects, papers, or presentations. (\bar{x} =3.4)
- Explain the scope and principal features of my major field of study including theories and practices. (\bar{x} =3.4)

They indicated that their knowledge, skills, or abilities in the following learning areas had been developed or strengthened the least due to their learning experience at Collin College.

- Maintain and troubleshoot equipment. (\bar{x} =2.7)
- Prepare and use budgets, make forecasts, keep records, and make adjustments to meet objectives. (\bar{x} =2.9)
- Effective negotiation skills. (\bar{x} =3.0)
- Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained. (\bar{x} =3.0)
- Collaborate in developing and implementing an approach to a civic issue. (\bar{x} =3.0)
- Acquire, store, allocate, and use materials and space efficiently. (\bar{x} =3.0)

Summarizing the highest and lowest scoring items it may be concluded that the areas where completers perceived that Collin College had contributed most in developing were specialized expertise and knowledge, intellectual skills and specific skills relating to major fields of study. The broad areas where completers perceived that Collin College had contributed least revolved around resourcefulness, management skills, interpersonal and social skills, civic learning and social responsibility.

Table 4-21 also present Cronbach's alpha scores for each subscale. All the learning outcomes subscales had good or excellent internal reliability, as measured by the Cronbach's Alpha. Subscales with alpha coefficients greater than or equal to 0.9 are considered to have excellent internal consistency and subscales with coefficients between 0.7 and 0.9 are considered to have good internal consistency. The Intellectual Skills (IS) subscale of the Degree Qualification Profile has the largest alpha coefficient ($\alpha=0.96$). The subscale with smallest alpha coefficient is Information (Inf) of SCANS-Workplace Competence ($\alpha=0.73$). It is important to note that this subscale includes only two items, and that the number of items has an impact on the size of Cronbach's alpha.

Table 4.

Perceptions of Learning Outcomes: DQP - Specialized Knowledge Subscale

Cronbach's Alpha= 0.91 (N=197)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
B1-Demonstrate proficiency in the use of tools, technologies, and methods within my major field of study.	Count	5	17	70	107	199	3.4	0.75
	%	2.5%	8.5%	35.2%	53.8%	100.0%		
B2-Use ideas, concepts, designs, or techniques from my major field of study to design a project that addresses a familiar but complex problem.	Count	11	25	74	90	200	3.2	0.87
	%	5.5%	12.5%	37.0%	45.0%	100.0%		
B24-Explain the scope and principal features of my major field of study including theories and practices.	Count	8	20	65	108	201	3.4	0.82
	%	4.0%	10.0%	32.3%	53.7%	100.0%		
B25-Define and properly use the current terminology in my major field of study.	Count	7	10	70	115	202	3.5	0.75
	%	3.5%	5.0%	34.7%	56.9%	100.0%		

Table 5.

Perceptions of Learning Outcomes: DQP - Broad Integrative Knowledge Subscale

Cronbach's Alpha= 0.91 (N=433)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities				Total	Mean	SD
		1	2	3	4	Total	Mean	SD
R1-Describe how knowledge or practice is developed, tested, and revised in the sciences, social sciences, humanities, and arts.	Count	22	55	161	195	433	3.2	0.86
	%	5.1%	12.7%	37.2%	45.0%	100.0%		
R2-Examine and describe perspectives on key debates within a variety of subject areas and in society.	Count	35	57	159	183	434	3.1	0.93
	%	8.1%	13.1%	36.6%	42.2%	100.0%		
R3-Recognize and apply methods to solve a problem or complete a task from the sciences, social sciences, humanities, or arts.	Count	17	49	159	209	434	3.3	0.82
	%	3.9%	11.3%	36.6%	48.2%	100.0%		
R4-Describe the ways in which at least two subject areas define, address, and justify a problem that is important to society.	Count	25	56	152	201	434	3.2	0.88
	%	5.8%	12.9%	35.0%	46.3%	100.0%		

Table 6.

Perceptions of Learning Outcomes: DQP - Intellectual Skills Subscale

Cronbach's Alpha= 0.96 (N=32)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?							
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities				Total	Mean	SD	
		1	2	3	4				
B4-Organize and process symbols, pictures, graphs, objects, and other information.	Count	15	33	60	89	197	3.1	0.95	
	%	7.6%	16.8%	30.5%	45.2%	100.0%			
R5-Analyze, evaluate, and synthesize ideas, concepts, theories, and practical approaches to problems.	Count	19	47	165	202	433	3.3	0.82	
	%	4.4%	10.9%	38.1%	46.7%	100.0%			
R6-Describe how cultural perspectives could affect interpretations of a problem in the arts, politics, or global relations.	Count	29	65	131	210	435	3.2	0.93	
	%	6.7%	14.9%	30.1%	48.3%	100.0%			
R7-Write substantially error-free prose that communicates effectively to specific audiences.	Count	20	61	156	198	435	3.2	0.86	
	%	4.6%	14.0%	35.9%	45.5%	100.0%			
Br1-Effective negotiation skills.	Count	41	64	108	133	346	3.0	1.02	
	%	11.8%	18.5%	31.2%	38.4%	100.0%			
Br2-Generate reasonable interpretations of numeric information, and understand calculations used to arrive at those interpretations.	Count	16	48	126	156	346	3.2	0.85	
	%	4.6%	13.9%	36.4%	45.1%	100.0%			
Br3-Understand my own perspectives on important issues, how my perspectives evolved, and how they may differ from the views of others.	Count	20	28	119	177	344	3.3	0.85	
	%	5.8%	8.1%	34.6%	51.5%	100.0%			
Br4-Appropriately cite multiple information sources from different media in projects, papers, or presentations.	Count	10	34	101	201	346	3.4	0.78	
	%	2.9%	9.8%	29.2%	58.1%	100.0%			
Br5-Effective discussion skills with specific audiences.	Count	19	35	121	170	345	3.3	0.86	
	%	5.5%	10.1%	35.1%	49.3%	100.0%			
Br6-Translate verbal problems into mathematical form, and accurately construct and solve them.	Count	22	61	111	152	346	3.1	0.92	
	%	6.4%	17.6%	32.1%	43.9%	100.0%			
Br7-Apply ethical principles or frameworks to social or personal problems.	Count	21	42	108	175	346	3.3	0.90	
	%	6.1%	12.1%	31.2%	50.6%	100.0%			

Table 7.

Perceptions of Learning Outcomes: DQP – Applied Learning Subscale

Cronbach's Alpha= 0.92 (N=341)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G3-Gather, organize, and evaluate evidence addressing a practical problem in a work or community setting.	Count	44	62	212	264	582	3.2	0.91
	%	7.6%	10.7%	36.4%	45.4%	100.0%		
R8-Apply learning from the classroom to real-world problems.	Count	20	43	158	212	433	3.3	0.83
	%	4.6%	9.9%	36.5%	49.0%	100.0%		
R9-Analyze a significant concept or method in class based on learning that occurred outside the classroom.	Count	27	57	156	196	436	3.2	0.89
	%	6.2%	13.1%	35.8%	45.0%	100.0%		
R10-Identify alternate approaches to addressing practical problems in a work or community setting.	Count	28	57	155	195	435	3.2	0.90
	%	6.4%	13.1%	35.6%	44.8%	100.0%		
Br8-Master practical skills in the classroom.	Count	11	41	122	172	346	3.3	0.80
	%	3.2%	11.8%	35.3%	49.7%	100.0%		

Table 8.

Perceptions of Learning Outcomes: DQP – Civic Learning Subscale

Cronbach's Alpha= 0.91 (N=342)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
R11-Describe my own social and cultural background, including origins, development, assumptions, and predispositions.	Count	45	67	129	194	435	3.1	1.00
	%	10.3%	15.4%	29.7%	44.6%	100.0%		
R12-Describe historical and contemporary positions on democratic values and practices, and present my position on a related problem.	Count	38	60	150	186	434	3.1	0.95
	%	8.8%	13.8%	34.6%	42.9%	100.0%		
R13-Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained.	Count	53	77	131	175	436	3.0	1.03
	%	12.2%	17.7%	30.0%	40.1%	100.0%		
Br9-Understand and take positions on international economic, environmental, or public health challenges.	Count	29	60	115	140	344	3.1	0.96
	%	8.4%	17.4%	33.4%	40.7%	100.0%		

Table 9.

Perceptions of Learning Outcomes: Texas Core Objective – Communication Skills Subscale

Cronbach's Alpha= 0.88 (N=111)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?				Total	Mean	SD
		1	2	3	4			
G5-Effectively develop, interpret, and express ideas through written communication.	Count	24	61	199	300	584	3.3	0.82
	%	4.1%	10.4%	34.1%	51.4%	100.0%		
G6-Effectively develop, interpret, and express ideas through oral communication.	Count	38	72	180	292	582	3.2	0.91
	%	6.5%	12.4%	30.9%	50.2%	100.0%		
G7-Effectively develop, interpret, and express ideas through visual communication.	Count	44	69	209	259	581	3.2	0.92
	%	7.6%	11.9%	36.0%	44.6%	100.0%		
B4-Organize and process symbols, pictures, graphs, objects, and other information.	Count	15	33	60	89	197	3.1	0.95
	%	7.6%	16.8%	30.5%	45.2%	100.0%		
R7-Write substantially error-free prose that communicates effectively to specific audiences.	Count	20	61	156	198	435	3.2	0.86
	%	4.6%	14.0%	35.9%	45.5%	100.0%		

Table 10.

Perceptions of Learning Outcomes: Texas Core Objective – Critical Thinking Skills Subscale

Cronbach's Alpha= 0.81 (N=431)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities				Total	Mean	SD
		1	2	3	4			
G4-Innovate and think creatively.	Count	32	73	227	251	583	3.2	0.86
	%	5.5%	12.5%	38.9%	43.1%	100.0%		
R5-Analyze, evaluate, and synthesize ideas, concepts, theories, and practical approaches to problems.	Count	19	47	165	202	433	3.3	0.82
	%	4.4%	10.9%	38.1%	46.7%	100.0%		

Table 11.

Perceptions of Learning Outcomes: Texas Core Objective – Empirical and Qualitative Skills Subscale

Cronbach's Alpha= 0.94 (N=30)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?							
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities							
		1	2	3	4	Total	Mean	SD	
G2-Perform accurate calculations and explain their use in real-world problems.	Count	30	69	230	255	584	3.2	0.85	
	%	5.1%	11.8%	39.4%	43.7%	100.0%			
G3-Gather, organize, and evaluate evidence addressing a practical problem in a work or community setting.	Count	44	62	212	264	582	3.2	0.91	
	%	7.6%	10.7%	36.4%	45.4%	100.0%			
B4-Organize and process symbols, pictures, graphs, objects, and other information.	Count	15	33	60	89	197	3.1	0.95	
	%	7.6%	16.8%	30.5%	45.2%	100.0%			
R10-Identify alternate approaches to addressing practical problems in a work or community setting.	Count	28	57	155	195	435	3.2	0.90	
	%	6.4%	13.1%	35.6%	44.8%	100.0%			
R14-Recognize, analyze, interpret, and understand observable facts.	Count	16	44	159	214	433	3.3	0.80	
	%	3.7%	10.2%	36.7%	49.4%	100.0%			
R15-Generate informed conclusions based on numerical data and observable facts.	Count	18	53	150	214	435	3.3	0.84	
	%	4.1%	12.2%	34.5%	49.2%	100.0%			
Br2-Generate reasonable interpretations of numeric information, and understand calculations used to arrive at those interpretations.	Count	16	48	126	156	346	3.2	0.85	
	%	4.6%	13.9%	36.4%	45.1%	100.0%			
Br5-Effective discussion skills with specific audiences.	Count	19	35	121	170	345	3.3	0.86	
	%	5.5%	10.1%	35.1%	49.3%	100.0%			
Br6-Translate verbal problems into mathematical form, and accurately construct and solve them.	Count	22	61	111	152	346	3.1	0.92	
	%	6.4%	17.6%	32.1%	43.9%	100.0%			

Table 12.

Perceptions of Learning Outcomes: Texas Core Objective – Personal Responsibilities Subscale

Cronbach's Alpha= 0.84 (N=343)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G8-Connect choices, actions, and consequences to ethical decision making.	Count	42	73	203	263	581	3.2	0.91
	%	7.2%	12.6%	34.9%	45.3%	100.0%		
Br7-Apply ethical principles or frameworks to social or personal problems.	Count	21	42	108	175	346	3.3	0.90
	%	6.1%	12.1%	31.2%	50.6%	100.0%		

Table 13.

Perceptions of Learning Outcomes: Texas Core Objective – Social Responsibilities Subscale

Cronbach's Alpha= 0.93 (N=341)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
R6-Describe how cultural perspectives could affect interpretations of a problem in the arts, politics, or global relations.	Count	29	65	131	210	435	3.2	0.93
	%	6.7%	14.9%	30.1%	48.3%	100.0%		
R11-Describe my own social and cultural background, including origins, development, assumptions, and predispositions.	Count	45	67	129	194	435	3.1	1.00
	%	10.3%	15.4%	29.7%	44.6%	100.0%		
R12-Describe historical and contemporary positions on democratic values and practices, and present my position on a related problem.	Count	38	60	150	186	434	3.1	0.95
	%	8.8%	13.8%	34.6%	42.9%	100.0%		
R13-Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained.	Count	53	77	131	175	436	3.0	1.03
	%	12.2%	17.7%	30.0%	40.1%	100.0%		
Br9-Understand and take positions on international economic, environmental, or public health challenges.	Count	29	60	115	140	344	3.1	0.96
	%	8.4%	17.4%	33.4%	40.7%	100.0%		
Br10-Collaborate in developing and implementing an approach to a civic issue.	Count	40	55	109	142	346	3.0	1.02
	%	11.6%	15.9%	31.5%	41.0%	100.0%		

Table 14.

Perceptions of Learning Outcomes: Texas Core Objective – Teamwork Subscale

Cronbach's Alpha= 0.85 (N=34)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G1-Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	Count	38	76	197	274	585	3.2	0.90
	%	6.5%	13.0%	33.7%	46.8%	100.0%		
B13-Work well with men and women from diverse backgrounds.	Count	17	26	56	101	200	3.2	0.97
	%	8.5%	13.0%	28.0%	50.5%	100.0%		
R2-Examine and describe perspectives on key debates within a variety of subject areas and in society.	Count	35	57	159	183	434	3.1	0.93
	%	8.1%	13.1%	36.6%	42.2%	100.0%		
Br10-Collaborate in developing and implementing an approach to a civic issue.	Count	40	55	109	142	346	3.0	1.02
	%	11.6%	15.9%	31.5%	41.0%	100.0%		

Table 15.

Perceptions of Learning Outcomes: SCANS – Basic Skills Subscale

Cronbach's Alpha= 0.91 (N=194)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G2-Perform accurate calculations and explain their use in real-world problems.	Count	30	69	230	255	584	3.2	0.85
	%	5.1%	11.8%	39.4%	43.7%	100.0%		
G5-Effectively develop, interpret, and express ideas through written communication.	Count	24	61	199	300	584	3.3	0.82
	%	4.1%	10.4%	34.1%	51.4%	100.0%		
G6-Effectively develop, interpret, and express ideas through oral communication.	Count	38	72	180	292	582	3.2	0.91
	%	6.5%	12.4%	30.9%	50.2%	100.0%		
B18-Locate, understand, and interpret written, oral, and visual information.	Count	11	31	66	92	200	3.2	0.89
	%	5.5%	15.5%	33.0%	46.0%	100.0%		
B19-Use effective listening and observational skills.	Count	10	29	65	95	199	3.2	0.88
	%	5.0%	14.6%	32.7%	47.7%	100.0%		

Table 16.

Perceptions of Learning Outcomes: SCANS – Personal Qualities Subscale

Cronbach's Alpha= 0.92 (N=196)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G8-Connect choices, actions, and consequences to ethical decision making.	Count	42	73	203	263	581	3.2	0.91
	%	7.2%	12.6%	34.9%	45.3%	100.0%		
B5-Demonstrate a high level of effort and perseverance toward goal attainment.	Count	12	21	73	94	200	3.2	0.87
	%	6.0%	10.5%	36.5%	47.0%	100.0%		
B6-Believe in my own self-worth and maintain a positive view of myself.	Count	17	26	52	105	200	3.2	0.97
	%	8.5%	13.0%	26.0%	52.5%	100.0%		
B7-Demonstrate understanding, friendliness, adaptability and empathy.	Count	23	28	48	100	199	3.1	1.05
	%	11.6%	14.1%	24.1%	50.3%	100.0%		
B8-Set personal goals, monitor progress, and exhibit self-control to attain those goals.	Count	17	28	57	97	199	3.2	0.97
	%	8.5%	14.1%	28.6%	48.7%	100.0%		

Table 17.

Perceptions of Learning Outcomes: SCANS – Thinking Skills Subscale

Cronbach's Alpha= 0.95 (N=191)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?				Total	Mean	SD	
		1	2	3	4				
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities							
G4-Innovate and think creatively.	Count	32	73	227	251	583	3.2	0.86	
	%	5.5%	12.5%	38.9%	43.1%	100.0%			
G7-Effectively develop, interpret, and express ideas through visual communication.	Count	44	69	209	259	581	3.2	0.92	
	%	7.6%	11.9%	36.0%	44.6%	100.0%			
B4-Organize and process symbols, pictures, graphs, objects, and other information.	Count	15	33	60	89	197	3.1	0.95	
	%	7.6%	16.8%	30.5%	45.2%	100.0%			
B20-Apply effective decision making skills.	Count	15	24	71	90	200	3.2	0.92	
	%	7.5%	12.0%	35.5%	45.0%	100.0%			
B21-Recognize problems and devise and implement a plan of action.	Count	12	27	69	92	200	3.2	0.89	
	%	6.0%	13.5%	34.5%	46.0%	100.0%			
B22-Use logic to draw conclusions from available information.	Count	12	29	73	87	201	3.2	0.89	
	%	6.0%	14.4%	36.3%	43.3%	100.0%			
B23-Use efficient learning techniques to acquire and apply new knowledge and skills.	Count	12	25	70	93	200	3.2	0.89	
	%	6.0%	12.5%	35.0%	46.5%	100.0%			

Table 18.

Perceptions of Learning Outcomes: SCANS – Information Subscale

Cronbach's Alpha= 0.73 (N=199)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G3-Gather, organize, and evaluate evidence addressing a practical problem in a work or community setting.	Count	44	62	212	264	582	3.2	0.91
	%	7.6%	10.7%	36.4%	45.4%	100.0%		
B14-Effectively use computers, mobile devices, or specialized equipment or technologies in the workplace.	Count	17	36	57	90	200	3.1	0.98
	%	8.5%	18.0%	28.5%	45.0%	100.0%		

Table 19.

Perceptions of Learning Outcomes: SCANS – Interpersonal Subscale

Cronbach's Alpha= 0.94 (N=32)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
G1-Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	Count	38	76	197	274	585	3.2	0.90
	%	6.5%	13.0%	33.7%	46.8%	100.0%		
G5-Effectively develop, interpret, and express ideas through written communication.	Count	24	61	199	300	584	3.3	0.82
	%	4.1%	10.4%	34.1%	51.4%	100.0%		
G6-Effectively develop, interpret, and express ideas through oral communication.	Count	38	72	180	292	582	3.2	0.91
	%	6.5%	12.4%	30.9%	50.2%	100.0%		
G7-Effectively develop, interpret, and express ideas through visual communication.	Count	44	69	209	259	581	3.2	0.92
	%	7.6%	11.9%	36.0%	44.6%	100.0%		
B12-Teach workplace skills to others.	Count	24	33	65	77	199	3.0	1.02
	%	12.1%	16.6%	32.7%	38.7%	100.0%		
B13-Work well with men and women from diverse backgrounds.	Count	17	26	56	101	200	3.2	0.97
	%	8.5%	13.0%	28.0%	50.5%	100.0%		
B17-Satisfy customers' expectations.	Count	21	31	68	79	199	3.0	0.99
	%	10.6%	15.6%	34.2%	39.7%	100.0%		
Br1-Effective negotiation skills.	Count	41	64	108	133	346	3.0	1.02
	%	11.8%	18.5%	31.2%	38.4%	100.0%		

Table 20.

Perceptions of Learning Outcomes: SCANS – Resources Subscale

Cronbach's Alpha= 0.91 (N=196)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?				Total	Mean	SD
		1	2	3	4			
B9-Select goal-relevant activities, prioritize them, and prepare and follow schedules.	Count	17	28	60	95	200	3.2	0.97
	%	8.5%	14.0%	30.0%	47.5%	100.0%		
B10-Prepare and use budgets, make forecasts, keep records, and make adjustments to meet objectives.	Count	27	44	53	72	196	2.9	1.06
	%	13.8%	22.4%	27.0%	36.7%	100.0%		
B11-Acquire, store, allocate, and use materials and space efficiently.	Count	25	35	62	77	199	3.0	1.03
	%	12.6%	17.6%	31.2%	38.7%	100.0%		

Table 21.

Perceptions of Learning Outcomes: SCANS – Technology Subscale

Cronbach's Alpha= 0.87 (N=197)

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
B14-Effectively use computers, mobile devices, or specialized equipment or technologies in the workplace.	Count	17	36	57	90	200	3.1	0.98
	%	8.5%	18.0%	28.5%	45.0%	100.0%		
B15-Compare and select the most appropriate procedures, tools, equipment or technologies in the workplace.	Count	14	30	67	88	199	3.2	0.93
	%	7.0%	15.1%	33.7%	44.2%	100.0%		
B16-Maintain and troubleshoot equipment.	Count	40	43	54	62	199	2.7	1.12
	%	20.1%	21.6%	27.1%	31.2%	100.0%		

Table 22.

Perceptions of Learning Outcomes: Overall Workforce Preparation

		Extent to which learning experiences at Collin College developed or strengthened knowledge, skills, or abilities in these areas of learning?						
		1=had no effect on my knowledge, skills, or abilities 4=greatly developed or strengthened my knowledge, skills, or abilities						
		1	2	3	4	Total	Mean	SD
B3-Master entry-level workplace skills necessary to embark on my chosen occupation.	Count	12	29	69	90	200	3.2	0.90
	%	6.0%	14.5%	34.5%	45.0%	100.0%		

Note. Cronbach's alpha could not be calculated as the subscale only had one item.

Table 23 presents a comparative analysis of reliability scores across the 2013 and 2015 pilot tests. As the survey instrument went from 76 to 58 items, the corresponding Cronbach's alpha scores also changed. With the exception of the DQP Intellectual Skills (IS) subscale and the Texas Core Objectives' (TCO) Empirical & Quantitative Skills (EQS) subscale, all subscales went through either a reduction in number of items or remained the same. With its alpha score going from 0.77 in the 2013 survey to 0.84 in 2015, the TCO Personal Responsibility (PR) subscale posted the largest positive change in alpha scores. Interestingly the number of items was the same in both iterations of the survey, but the wording of the second item was simplified. The SCANS Information (Inf) Workplace Competence subscale posted the greatest negative change with alpha coefficient going from 0.91 in 2013 to 0.73 in 2015. This subscale had been reduced from 5 to 2 items in addition to re-wording the second item. The lower alpha value indicates lower inter-item reliability and warrants either adding more questions that test the same underlying construct or rewording existing questions to better measure the construct. The SCANS Workplace Competence Systems (S) subscale is left blank for 2015 as none of the items fell into the category. Overall, Table 23 suggests sections of the survey instrument that could be further simplified or reduced. The DQP Intellectual Skills (IS) subscale and the TCO Empirical and Quantitative (EQS) subscale resulted in high alpha scores (0.96 and 0.94 respectively) after adding additional items in the 2015 administration of the survey. Very high alpha scores may suggest that there may be opportunities for further shortening the survey before the next iteration.

Table 23.
*Reliability Comparison Between Survey Administrations
2013 and 2015*

Scales	2013 Pilot		2015 Pilot		Change in items	Change in Alpha
	Number of Items	Cronbach's Alpha	Number of Items	Cronbach's Alpha		
<i>Degree Qualification Profile (DQP)</i>						
Specialized Knowledge (SK)	9	0.94	4	0.91	-5	-0.03
Broad, Integrative Knowledge (BIK)	11	0.96	4	0.91	-7	-0.05
Intellectual Skills (IS)	9	0.93	11	0.96	2	0.03
Applied & Collaborative Learning (ACL)	9	0.94	5	0.92	-4	-0.02
Civic & Global Learning (CGL)	6	0.94	4	0.91	-2	-0.03
<i>Texas Core Objectives</i>						
Communication Skills (CS)	5	0.92	5	0.88	0	-0.04
Critical Thinking Skills (CTS)	4	0.87	2	0.81	-2	-0.06
Empirical & Quantitative Skills (EQS)	6	0.91	9	0.94	3	0.03
Personal Responsibility (PR)	2	0.77	2	0.84	0	0.07
Social Responsibility (SR)	8	0.95	6	0.93	-2	-0.02
Teamwork (TW)	5	0.91	4	0.85	-1	-0.06
<i>SCANS - Foundation</i>						
Basic Skills (BS)	5	0.91	5	0.91	0	0
Personal Qualities (PQ)	5	0.94	5	0.92	0	-0.02
Thinking Skills (TS)	7	0.95	7	0.95	0	0
<i>SCANS - Workplace Competence</i>						
Information (INF)	5	0.91	2	0.73	-3	-0.18
Interpersonal (INT)	9	0.95	8	0.94	-1	-0.01
Resources (R)	4	0.92	3	0.91	-1	-0.01
Systems (S)	3	0.94	0	-	-3	-
Technology (T)	3	0.9	3	0.87	0	-0.03

Note. The alpha score for Overall Workforce Preparation subscale could not be computed as it had only one item.

Section III: Perceptions of Learning Outcomes by Demographic and Completer Background Variables

One-way ANOVA tests were carried out to gauge whether there were significant differences among group means within each of the demographic variables. It is important to remember that the means were computed from responses given on a 1-4 scale with 4 representing highest score, and 1 the lowest. Therefore, higher means represent more positive rating given to Collin on any given item. Tables 24 through 29 present ANOVA results for only those items that exhibited statistically significant differences.

Perceptions of Learning Outcomes by Age

The data in Table 24 indicates two items where age differences were found to be statistically significant. Using the 0.05 cut-off for determining statistical significance suggests that the null hypothesis should be rejected that there is no differences among means based on age. For each of the two items, the 55 years and older age group rated the contribution of Collin lowest compared to all other age groups. For the “Describe how knowledge or practice is developed, tested, and revised in the sciences, social sciences, humanities, and arts” item, 30 to 35 year-olds endorsed Collin’s contribution the highest with a mean of 3.39; for the “Generate informed conclusions based on numerical data and observable facts” item, 23-29 year-olds rated Collin highest with a mean of 3.44. The probabilities of obtaining F values of 2.611 and 2.431 by chance for this sample were 2 and 3 percent respectively. Summarizing the items where age differences were significant, it may be concluded that Collin completers differed based on age group in their perceptions of Collin College’s contributions to their learning of research, deduction, critical thinking, and reasoning skills.

Table 24.

Perception of Learning Outcomes by Age

	Age	N	Mean	F (df.)	p
R1-Describe how knowledge or practice is developed, tested, and revised in the sciences, social sciences, humanities, and arts.	18-22 years	99	3.29	2.611 (5,427)	0.024
	23-29 years	99	3.23		
	30-35 years	57	3.39		
	36-40 years	47	3.11		
	41-54 years	113	3.21		
	55 years or older	18	2.61		
	Total	433	3.22		
R15-Generate informed conclusions based on numerical data and observable facts.	18-22 years	99	3.34	2.431 (5,429)	0.034
	23-29 years	100	3.44		
	30-35 years	59	3.41		
	36-40 years	47	3.19		
	41-54 years	112	3.13		
	55 years or older	18	3.00		
	Total	435	3.29		

Perceptions of Learning Outcomes by Gender

Gender differences were the most pronounced among all demographic variables. Fifteen of the 58 items resulted in statistically significant gender differences with probabilities (p-values) ranging from 0.001 to 0.042. For all items in Table 25 women held more positive perceptions compared to males about Collin's contribution in achieving learning outcomes. The highest mean difference between the two genders was for the item "*Explain the scope and principal features of my major field of study including theories and practices,*" where the mean rating for women was 3.49 and for men 3.14. The probability of this result being an outcome of chance is 3 in a thousand. The areas where Collin completers differed based on gender can be summarized into teamwork and collaboration skills, communication skills, critical thinking and problem-solving skills, specialized knowledge and intellectual skills, personal management, personal responsibility and civic learning.

Table 25.

Perception of Learning Outcomes by Gender

	Gender	N	Mean	F (df.)	p
G1-Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	Female	369	3.28	5.314 (1,581)	0.022
	Male	214	3.10		
	Total	583	3.21		
G3-Gather, organize, and evaluate evidence addressing a practical problem in a work or community setting.	Female	367	3.27	6.850 (1,578)	0.009
	Male	213	3.07		
	Total	580	3.19		
G5-Effectively develop, interpret, and express ideas through written communication.	Female	369	3.38	4.191 (1,580)	0.041
	Male	213	3.23		
	Total	582	3.33		
G7-Effectively develop, interpret, and express ideas through visual communication.	Female	366	3.26	7.822 (1,577)	0.005
	Male	213	3.04		
	Total	579	3.18		
G8-Connect choices, actions, and consequences to ethical decision making.	Female	368	3.27	10.262 (1,577)	0.001
	Male	211	3.02		
	Total	579	3.18		
B6-Believe in my own self-worth and maintain a positive view of myself.	Female	126	3.33	4.206 (1,197)	0.042
	Male	73	3.04		
	Total	199	3.23		
B8-Set personal goals, monitor progress, and exhibit self-control to attain those goals.	Female	126	3.29	4.412 (1,196)	0.037
	Male	72	2.99		
	Total	198	3.18		
B20-Apply effective decision making skills.	Female	126	3.29	4.540 (1,197)	0.034
	Male	73	3.00		
	Total	199	3.18		
B21-Recognize problems and devise and implement a plan of action.	Female	126	3.31	4.680 (1,197)	0.032
	Male	73	3.03		
	Total	199	3.21		
B24-Explain the scope and principal features of my major field of study including theories and practices.	Female	126	3.49	9.177 (1,198)	0.003
	Male	74	3.14		
	Total	200	3.36		

Table 25.

Perception of Learning Outcomes by Gender, Continued...

	Gender	N	Mean	F (df.)	p
R4-Describe the ways in which at least two subject areas define, address, and justify a problem that is important to society.	Female	278	3.30	6.401 (1,432)	0.012
	Male	156	3.08		
	Total	434	3.22		
R6-Describe how cultural perspectives could affect interpretations of a problem in the arts, politics, or global relations.	Female	279	3.29	6.892 (1,433)	0.009
	Male	156	3.04		
	Total	435	3.20		
Br1-Effective negotiation skills.	Female	216	3.06	5.848 (1,344)	0.016
	Male	130	2.79		
	Total	346	2.96		
Br7-Apply ethical principles or frameworks to social or personal problems.	Female	216	3.35	5.728 (1,344)	0.017
	Male	130	3.12		
	Total	346	3.26		
Br9-Understand and take positions on international economic, environmental, or public health challenges.	Female	215	3.17	6.808 (1,342)	0.009
	Male	129	2.89		
	Total	344	3.06		

Perceptions of Learning Outcomes by Ethnicity

The data in Table 26 presents two items where difference between ethnic groups (Hispanic or non-Hispanic) were found to be statistically significant under the standard probability cut point of 0.05. For both items Hispanics held more positive perceptions regarding Collin's contribution in attaining learning outcomes. For the "*Effectively develop, interpret, and express ideas through written communication*" item, the mean perception rating for Hispanics was 3.48 compared to 3.29 for non-Hispanics with 3.7% probability that the difference was due to chance. For the "*Effectively develop, interpret, and express ideas through visual communication*" item, the mean perception rating for Hispanics was 3.34 compared to 3.14 for non-Hispanics with 4.3% probability that the difference was due to chance. The items where differences in ethnicity contributed to statistically significant different observations can be summarized as written and visual communication skills.

Table 26.

Perception of Learning Outcomes by Ethnicity

	Ethnicity	N	Mean	F (df.)	p
G5-Effectively develop, interpret, and express ideas through written communication.	Non-Hispanic	472	3.29	4.36 (1,569)	0.037
	Hispanic	99	3.48		
	Total	571	3.33		
G7-Effectively develop, interpret, and express ideas through visual communication.	Non-Hispanic	469	3.14	4.11 (1,566)	0.043
	Hispanic	99	3.34		
	Total	568	3.17		

Perceptions of Learning Outcomes by Race

Table 27 presents items where race differences were identified. Probabilities that differences were due to chance ranged from 1% to 3.2%. Mean perceptions of learning outcomes differed among racial group for seven of the outcome variables. In each of the seven items, White respondents consistently rated Collin's contribution significantly lower compared to other races. Post hoc analysis revealed that in 4 of the 7 items, multiracial respondents rated Collin's contribution at the highest while Black respondents rated Collin highest in the remaining three. The largest difference was observed in the "*Organize and process symbols, pictures, graphs, objects, and other information*" item where White respondents posted the lowest mean rating of 2.95 and Black respondents posted the highest mean rating at 3.52. The broad areas where variations among racial groups contributed to statistically significant differences in results can be summarized into teamwork, visual communication, critical thinking and reasoning skills, intellectual skills and ability to apply learning to a variety of situations.

Table 27.

Perception of Learning Outcomes by Race

	Race	N	Mean	F (df.)	p
G1-Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	Asian	69	3.32	3.079 (3,579)	0.027
	Black	100	3.38		
	White	327	3.11		
	Multiracial/Other/NA	87	3.30		
	Total	583	3.21		
G7-Effectively develop, interpret, and express ideas through visual communication.	Asian	68	3.35	3.847 (3,575)	0.010
	Black	100	3.24		
	White	324	3.07		
	Multiracial/Other/NA	87	3.37		
	Total	579	3.18		
B4-Organize and process symbols, pictures, graphs, objects, and other information.	Asian	28	3.36	3.686 (3,192)	0.013
	Black	33	3.52		
	White	109	2.95		
	Multiracial/Other/NA	26	3.15		
	Total	196	3.13		
R1-Describe how knowledge or practice is developed, tested, and revised in the sciences, social sciences, humanities, and arts.	Asian	49	3.33	2.871 (3,429)	0.036
	Black	77	3.32		
	White	244	3.12		
	Multiracial/Other/NA	63	3.41		
	Total	433	3.22		
R5-Analyze, evaluate, and synthesize ideas, concepts, theories, and practical approaches to problems.	Asian	49	3.35	3.4 (3,429)	0.018
	Black	77	3.39		
	White	244	3.16		
	Multiracial/Other/NA	63	3.48		
	Total	433	3.27		

Table 27.

Perception of Learning Outcomes by Race, Continued...

R6-Describe how cultural perspectives could affect interpretations of a problem in the arts, politics, or global relations.	Asian	50	3.32	4.222 (3,431)	0.006
	Black	77	3.31		
	White	245	3.07		
	Multiracial/Other/NA	63	3.48		
	Total	435	3.20		
R9-Analyze a significant concept or method in class based on learning that occurred outside the classroom.	Asian	51	3.39	3.164 (3,432)	0.024
	Black	77	3.39		
	White	245	3.09		
	Multiracial/Other/NA	63	3.19		
	Total	436	3.19		

Perceptions of Learning Outcomes by Highest Award Received

Table 28 presents five of the 58 items where differences based on highest award were statistically significant. In each case, respondents who completed certificates rated Collin's contribution lower than those who completed other awards, with lowest mean rating of 2.95 posted for the item, "*Effectively develop, interpret, and express ideas through oral communication.*" The highest mean came for the item "*Effectively develop, interpret, and express ideas through written communication,*" from AA/AS/AAT completers (3.43). This was also the item with the highest between-groups difference in means. For all remaining items, the highest mean scores came from core completers. The areas can be summarized into communication, critical thinking and teamwork/interpersonal skills.

Table 28.

Perception of Learning Outcomes by Highest Award

	Highest Award	N	Mean	F (df.)	p
G1-Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	AA/AS/AAT	263	3.25	2.75 (3,579)	0.042
	AAS	112	3.17		
	Core	125	3.32		
	Certificate	83	2.98		
	Total	583	3.21		
G4-Innovate and think creatively.	AA/AS/AAT	261	3.25	2.81 (3,577)	0.039
	AAS	111	3.13		
	Core	125	3.30		
	Certificate	84	2.99		
	Total	581	3.20		
G5-Effectively develop, interpret, and express ideas through written communication.	AA/AS/AAT	263	3.43	5.61 (3,578)	0.001
	AAS	112	3.20		
	Core	125	3.40		
	Certificate	82	3.06		
	Total	582	3.33		

Table 29.

Perception of Learning Outcomes by Highest Award, Continued...

G6-Effectively develop, interpret, and express ideas through oral communication.	AA/AS/AAT	262	3.30	5.49 (3,576)	0.001
	AAS	111	3.14		
	Core	125	3.43		
	Certificate	82	2.95		
	Total	580	3.25		
G7-Effectively develop, interpret, and express ideas through visual communication.	AA/AS/AAT	260	3.20	2.82 (3,575)	0.038
	AAS	111	3.08		
	Core	125	3.33		
	Certificate	83	2.99		
	Total	579	3.18		

Perceptions of Learning Outcomes by Completion Year

The data in Table 29 presents 5 of the 58 items where differences between award completion year were found to be statistically significant under the standard probability of 0.05 as the cut point. For each of the five items, completers who had been awarded their highest degree in 2014 held more positive perceptions regarding Collin's contribution in attaining learning outcomes compared to those from 2015. The greatest observed difference in means was for the item "*Teach workplace skills to others*" where 2014 completers averaged a rating of 3.21 compared to 2015 completers' mean rating of 2.85. The areas where differences based on highest award completion year were significant can be summarized into workplace preparation skills, critical thinking skills, ability to apply knowledge, and social skills.

Table 30.

Perception of Learning Outcomes by Highest Award Completion Year

	Award Year	N	Mean	F (df.)	p
B3-Master entry-level workplace skills necessary to embark on my chosen occupation.	2014	73	3.36	4.19 (1,197)	0.042
	2015	126	3.09		
	Total	199	3.19		
B7-Demonstrate understanding, friendliness, adaptability and empathy.	2014	72	3.33	4.269 (1,196)	0.040
	2015	126	3.02		
	Total	198	3.13		
B12-Teach workplace skills to others.	2014	73	3.21	5.77 (1,196)	0.017
	2015	125	2.85		
	Total	198	2.98		
B22-Use logic to draw conclusions from available information.	2014	73	3.37	5.918 (1,198)	0.016
	2015	127	3.06		
	Total	200	3.17		
B23-Use efficient learning techniques to acquire and apply new knowledge and skills.	2014	73	3.44	7.107 (1,197)	0.008
	2015	126	3.10		
	Total	199	3.22		

Section IV: Exploratory Factor Analysis of Survey Items

Item level responses were scrutinized for underlying patterns via exploratory factor analysis. The factors identified in this section indicate the primary topics or latent variables to which each group of items appear to be corresponding. It was impossible to compile a factor analytic model comprising all 58 items since items subscribed to specific award completer categories and less than 7 percent of the completers completed all sections. Therefore, factor analytic procedures were implemented on each subset of items based on completer groups to which they were presented (Green, Blue, Red, and Brown). Principal Axis Factor (PAF) with orthogonal rotation (where appropriate) was conducted on each subset of items.

Table 30 presents factor loading for the eight green items that were presented to all completers. Only one factor could be extracted onto which all eight items loaded. An examination of Kaiser-Meyer Olkin measure of sampling adequacy suggests that the sample of size 563 was factorable ($KMO=.946$). The single factor explained 73 percent of total variance in the eight items which indicates that all green items are measuring only one latent variable.

Table 31.

Factor Matrix for Eight Green Items – Presented to All Completers

	Factor 1
G1-Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	0.835
G2-Perform accurate calculations and explain their use in real-world problems.	0.766
G3-Gather, organize, and evaluate evidence addressing a practical problem in a work or community setting.	0.848
G4-Innovate and think creatively.	0.831
G5-Effectively develop, interpret, and express ideas through written communication.	0.802
G6-Effectively develop, interpret, and express ideas through oral communication.	0.857
G7-Effectively develop, interpret, and express ideas through visual communication.	0.866
G8-Connect choices, actions, and consequences to ethical decision making.	0.845
Eigenvalues	5.84
Percentage of total variance	73.01

Note. Loadings => .50 are presented in bold.

Table 31 presents factor loading for the 25 blue items that were presented to AAS and certificate completers. Two factor were extracted, with percentages of variance explained by each being 43 and 28 percent respectively. Twenty-one items loaded onto the first factor and four loaded onto the second

one. An examination of Kaiser-Meyer Olkin measure of sampling adequacy suggests that the sample of size 184 was factorable (KMO=.959). The analysis suggests that the 25 blue items are corresponding to two latent factors.

Table 32.

Rotated Factor Matrix for 25 Blue Items – Presented to AAS/Certificate Completers

	Factor	
	1	2
B1-Demonstrate proficiency in the use of tools, technologies, and methods within my major field of study.	0.370	0.756
B2-Use ideas, concepts, designs, or techniques from my major field of study to design a project that addresses a familiar but complex problem.	0.447	0.727
B3-Master entry-level workplace skills necessary to embark on my chosen occupation.	0.560	0.534
B4-Organize and process symbols, pictures, graphs, objects, and other information.	0.661	0.486
B5-Demonstrate a high level of effort and perseverance toward goal attainment.	0.668	0.496
B6-Believe in my own self-worth and maintain a positive view of myself.	0.669	0.489
B7-Demonstrate understanding, friendliness, adaptability and empathy.	0.715	0.390
B8-Set personal goals, monitor progress, and exhibit self-control to attain those goals.	0.828	0.341
B9-Select goal-relevant activities, prioritize them, and prepare and follow schedules.	0.786	0.352
B10-Prepare and use budgets, make forecasts, keep records, and make adjustments to meet objectives.	0.737	0.368
B11-Acquire, store, allocate, and use materials and space efficiently.	0.835	0.349
B12-Teach workplace skills to others.	0.772	0.398
B13-Work well with men and women from diverse backgrounds.	0.649	0.424
B14-Effectively use computers, mobile devices, or specialized equipment or technologies in the workplace.	0.699	0.379
B15-Compare and select the most appropriate procedures, tools, equipment or technologies in the workplace.	0.611	0.534
B16-Maintain and troubleshoot equipment.	0.673	0.315
B17-Satisfy customers' expectations.	0.698	0.495
B18-Locate, understand, and interpret written, oral, and visual information.	0.657	0.578
B19-Use effective listening and observational skills.	0.661	0.580
B20-Apply effective decision making skills.	0.718	0.537
B21-Recognize problems and devise and implement a plan of action.	0.645	0.604
B22-Use logic to draw conclusions from available information.	0.745	0.465
B23-Use efficient learning techniques to acquire and apply new knowledge and skills.	0.655	0.609
B24-Explain the scope and principal features of my major field of study including theories and practices.	0.374	0.752
B25-Define and properly use the current terminology in my major field of study.	0.286	0.832
Eigenvalues	10.862	7.036
Percentage of total variance	43.449	28.142
Number of items	21	4

Note. Loadings => .50 are presented in bold.

Table 32 presents factor loading for the 15 red items that were presented to any associate’s degree or core completer. Only one factor could be extracted onto which all 15 items loaded. An examination of Kaiser-Meyer Olkin measure of sampling adequacy suggests that the sample of size 422 was factorable (KMO=.968). The single factor explained 69 percent of total variance in the 15 items which indicates that all red items are measuring only one latent variable.

Table 33.

Factor Matrix for 15 Red Items – Presented to All Associates or Core Completers

	Factor 1
R1-Describe how knowledge or practice is developed, tested, and revised in the sciences, social sciences, humanities, and arts.	0.778
R2-Examine and describe perspectives on key debates within a variety of subject areas and in society.	0.840
R3-Recognize and apply methods to solve a problem or complete a task from the sciences, social sciences, humanities, or arts.	0.800
R4-Describe the ways in which at least two subject areas define, address, and justify a problem that is important to society.	0.862
R5-Analyze, evaluate, and synthesize ideas, concepts, theories, and practical approaches to problems.	0.843
R6-Describe how cultural perspectives could affect interpretations of a problem in the arts, politics, or global relations.	0.822
R7-Write substantially error-free prose that communicates effectively to specific audiences.	0.751
R8-Apply learning from the classroom to real-world problems.	0.776
R9-Analyze a significant concept or method in class based on learning that occurred outside the classroom.	0.830
R10-Identify alternate approaches to addressing practical problems in a work or community setting.	0.872
R11-Describe my own social and cultural background, including origins, development, assumptions, and predispositions.	0.800
R12-Describe historical and contemporary positions on democratic values and practices, and present my position on a related problem.	0.833
R13-Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained.	0.799
R14-Recognize, analyze, interpret, and understand observable facts.	0.827
R15-Generate informed conclusions based on numerical data and observable facts.	0.817
Eigenvalues	10.349
Percentage of total variance	68.993

Note. Loadings => .50 are presented in bold.

Table 33 presents factor loadings for the 10 brown items that were presented to AA/AAT/AS or core completers. Only one factor could be extracted onto which all 10 items loaded. An examination of Kaiser-Meyer Olkin measure of sampling adequacy suggests that the sample of size 341 was factorable (KMO=.926). The single factor explained 65 percent of total variance in the 10 items which indicates that all brown items are measuring only one latent variable.

Table 34.

Factor Matrix for 10 Brown Items – Items Presented to AA/AS or Core Completers

	Factor
	1
Br1-Effective negotiation skills.	0.817
Br2-Generate reasonable interpretations of numeric information, and understand calculations used to arrive at those interpretations.	0.811
Br3-Understand my own perspectives on important issues, how my perspectives evolved, and how they may differ from the views of others.	0.850
Br4-Appropriately cite multiple information sources from different media in projects, papers, or presentations.	0.676
Br5-Effective discussion skills with specific audiences.	0.835
Br6-Translate verbal problems into mathematical form, and accurately construct and solve them.	0.747
Br7-Apply ethical principles or frameworks to social or personal problems.	0.879
Br8-Master practical skills in the classroom.	0.767
Br9-Understand and take positions on international economic, environmental, or public health challenges.	0.816
Br10-Collaborate in developing and implementing an approach to a civic issue.	0.845
Eigenvalues	6.839
Percentage of total variance	68.392

Note. Loadings => .50 are presented in bold.

Section V: Perceptions of Learning Support

In this section there were 33 items for which completers were asked to share their perception of the level of importance they placed on each service or activity using a scale of 1 to 5, where 1 represented “not very important” and 5 represented “very important.” They were also asked to rate their satisfaction with each service or activity using another five-point scale where 1 represented “very dissatisfied” and 5 represented “very satisfied.” When participants had no experience with a given service or activity, they were asked to leave the satisfaction scale blank and select a value of 6 for “no experience” on the importance scale. Blank items were provided at the end of the Perceptions of Learning Support section to allow participants to identify and rate their perceived importance and satisfaction with aspects of the learning support environment which were not included among the 33 items provided.

Figure 1 compares how important various aspects of student learning support were to program completers with how satisfied they were with those same aspects of learning support. The performance gap is calculated by subtracting the mean satisfaction rating from the mean importance rating. The mean scores for the five-point importance scale ranged from 4.0 to 4.7. The mean scores for the satisfaction scale ranged from 3.5 to 4.5. Based on the mean scores, “*Overall Classroom Instructional Quality*,” “*Registration for Classes*,” “*Campus Safety and Security*,” “*Academic Advising- Accuracy of Information*,” “*Admission to the College*,” “*Academic Advising Service Quality*,” “*Quality of Online Services*,” “*College Web Site Navigation*,” and “*Access to Online Services*” were found to be the most important aspects of student support. “*Bookstore*,” “*Student Organizations*,” and “*Student Activities/Student Life*” were found to be the least important. Students indicated that they were most satisfied with “*College Buildings and Facilities*,” “*Library Services Quality*,” “*Library Resource Availability*,” “*Access to Online Services*,” “*Campus Safety and Security*” and “*Computer Labs*.” They were least satisfied with “*Career Counselling Help with Job Placement*,” “*Career Counselling Service Quality*” and “*Academic Advising Information Accuracy*.” These results were consistent with findings of the 2013 pilot.

Large positive performance gaps reflect program completers who think the services are important to them, but they are not satisfied with the services they received. Small performance gaps reflect the services for which the importance and satisfaction are more closely aligned with each other; i.e., a given service or activity may be seen as important and satisfaction is high, or satisfaction is lower but the given support service or activity is not viewed as particularly important.

The results of this pilot survey identified “*Academic Advising Information Accuracy*,” “*Academic Advising Service Quality*” and “*Career Counselling Help with Job Placement*” as services and activities showing the largest positive performance gaps. Areas with the smallest performance gaps include “*College Buildings and Facilities*,” “*Library Resource Availability*,” “*Library Service Quality*,” “*Student Activities/Student Life*,” “*Student Organizations and Computer Labs*.” College buildings and facilities was the only learning support area where satisfaction exceeded importance, albeit only marginally. Figure 1 identifies academic advising information accuracy and academic advising service quality as aspects of the learning support environment that require the most attention as they are both rated fourth and sixth, respectively, on importance but exhibit large performance gaps.

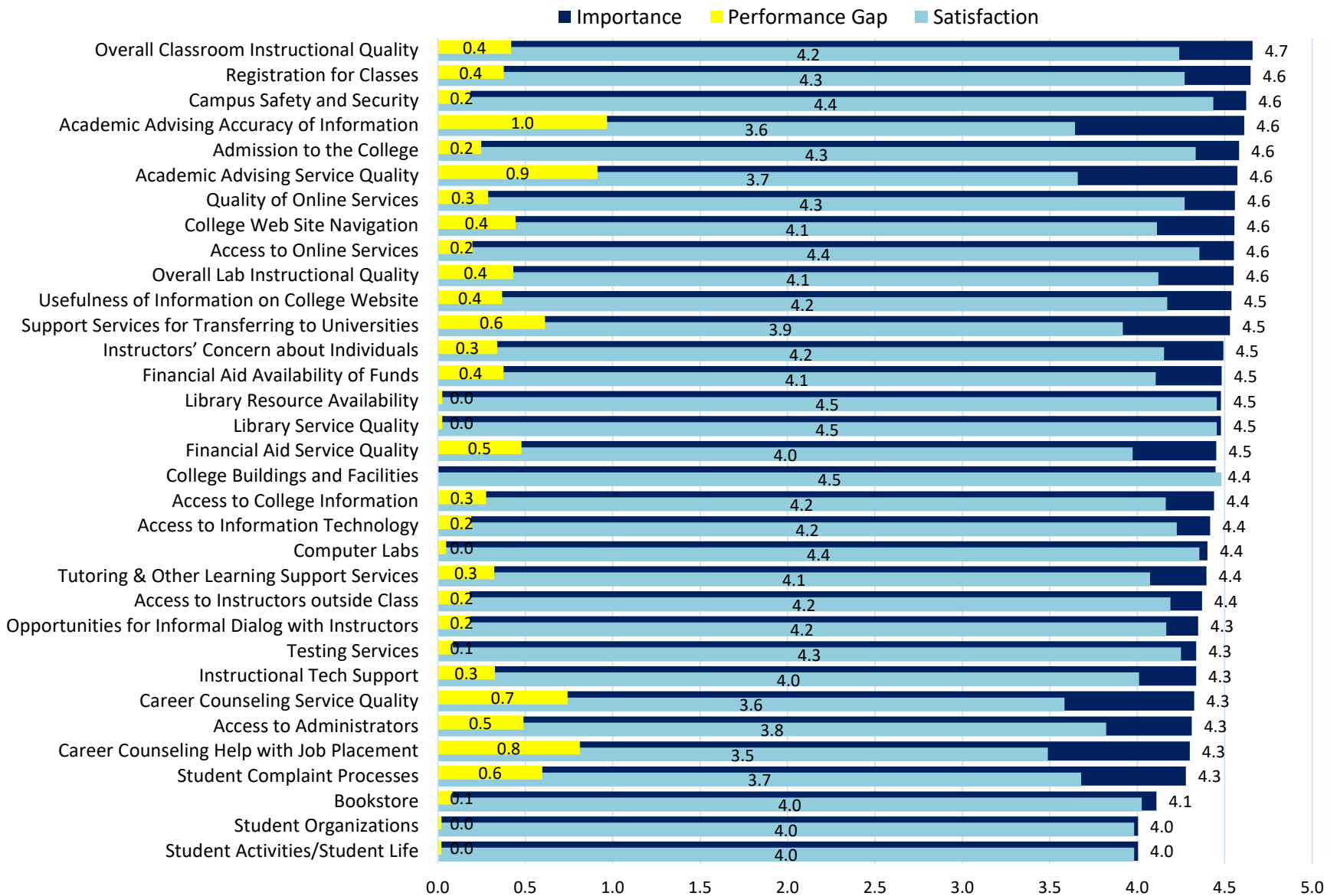


Figure 1. Importance of and Satisfaction with Aspects of Learning Support – Mean Responses

Summary

The pilot survey summarized in this report explored how Collin College program completers perceive the impact of their Collin learning experiences on their learning outcomes. It also provides feedback about how they perceive the College's learning support services and activities. Results obtained indicated that majority of program completers believe that their experiences at Collin College developed or strengthened their knowledge, skills, or abilities in all areas of learning. More specifically, students believe that their knowledge, skills, or abilities had been developed or strengthened the most in learning areas such as:

- Define and properly use the current terminology in my major field of study.
- Demonstrate proficiency in the use of tools, technologies, and methods within my major field of study.
- Appropriately cite multiple information sources from different media in projects, papers, or presentations.
- Explain the scope and principal features of my major field of study including theories and practices.

While still positive, learning areas with lowest perceived outcomes include:

- Maintain and troubleshoot equipment.
- Prepare and use budgets, make forecasts, keep records, and make adjustments to meet objectives.
- Effective negotiation skills.
- Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained.
- Collaborate in developing and implementing an approach to a civic issue.
- Acquire, store, allocate, and use materials and space efficiently.

The results also indicated moderate to high level of inter-item consistency for each of the subscales. Comparing the reliability scores across the 2013 and 2015 pilot tests, the Personal Responsibility (PR) subscale of the Texas Core Objectives posted the largest improvement in reliability, while the Information (Inf) subscale of the SCANS Workplace Competence posted the greatest decline. The results indicated areas where the survey design might be improved and where the introduction of additional items or rewording of existing items may improve reliability scores in future iterations of the survey. In addition, opportunities for pruning the survey instrument may also be explored, specifically in the cases of the Intellectual Skills (IS) subscale of the DQP and the Empirical and Quantitative (EQS) subscale of the Texas Core Objectives.

Significant differences based on age were found in items related to research, deduction, critical-thinking and reasoning skills. Differences based on gender were found to be significant in several areas such as teamwork; collaboration; communication; critical thinking; problem-solving; specialized knowledge; and intellectual, personal management, personal responsibility and civic learning skills. Collin completers also differed based on ethnicity in written and visual communication skills. They also differed by highest award received in the learning areas of written, oral and visual communication skills. Race differences contributed to statistically significant differences in teamwork, visual communication, critical thinking, reasoning and intellectual skills, and the ability to apply learning to a variety of situations. The skill sets where significant differences were found based on award year, were workplace preparation skills, critical thinking skills, social skills, and ability to apply knowledge.

The most important aspects of student support for completers were overall classroom instructional quality, registration for classes, campus safety and security, academic advising-accuracy of information, admission to the college, academic advising service quality, quality of online services, college Web site navigation, and access to online services. They indicated that they were most satisfied with college buildings and facilities, library services quality, library resource availability, access to online services, campus safety and security and computer labs.

Student learning support activities and services with the largest performance gaps included academic advising information accuracy, academic advising service quality and career counselling help with job placement. Areas with the smallest performance gaps included college buildings and facilities, library resource availability, library service quality, student activities/Student Life, student organizations and computer labs. Survey participants also communicated 145 open-ended responses to the request for additional areas of learning support beyond the 33 areas provided by the questionnaire. A listing of the 145 items is included in Appendix A. Since many respondents resorted to providing comments in place of important service areas. It may be advisable to place a word limit in the next iteration of the survey in order to ensure correct responses. In addition, it is also suggested that this section be simplified by asking respondents to identify only additional support areas that they find important, instead of asking them to rate each on importance as well as satisfaction.

The findings of this pilot survey should be interpreted in light of some project limits. The 2015 survey was administered very close to the holiday season. This may have contributed to unexpectedly low response rates. Six email reminders boosted responses but may have contributed to survey fatigue and measurement errors. For future administrations of the survey it is advisable to launch the survey earlier to circumvent this problem. In addition, simplifying the language of some of the items may also be explored as some potential respondents expressed frustration with the survey's language complexity.

APPENDICES

APPENDIX A

List of Learning Support Activities and Services Added by Survey Respondents

Table A.

List of Learning Support Activities and Services Added by Survey Respondents

Prompt: "If there are any other aspects of student support that were important to you but were not included in the list on previous page, please list and rate them below."

Counseling Services

2 years down the tube, when I should have been studying for my certs and they could have been done from home!

Academic advisers

ACCESS Face-to-Face advisor

Access to all student services at all time of day

Access to bookstore

Access to computers

Access to counselors

Access to Deaf lab

Access to Dean

Access to library

Academic counseling post Collin College should be more helpful and emphasized

Admission information

Advising

Application of knowledge gained from student completed instructor surveys.

Assistance and access to advisor office

Availability of classes

Availability of Office of Disability Advisers

Bookstore prices

Cafeteria

Campus Facilities

Career counseling should be more robust and emphasized

Career Opportunities for students

Class Availability

Class cancelation process

College staff behaviors

Conference Rooms

Controversial ideas/conversation

Convent off campus classes

Co-op, Internship programs

Counsel prior to degree selection

Cva [sic] 2 class I needed

Didn't mean to check this one

Dining Options

Disability accommodation

Table A.

Continued...

Diversity of food options on campus
DOL Grant Tutors-Coaches
Ease of navigating website
EMS Program
Events on campus
Failure to respond to future students in timely manner (Jackie Carter)
Field related software learning
Financial aid advisers
Finding and scheduling DHYG patients
Flexibility of Available Course Offerings (The order in which the courses can be taken, coupled with what courses are offered each semester)
Food Services
Friendliness/willingness to help by financial aid administrators
Graduation procedures & processes
Have not yet received my diploma
Helpfulness of professors (generally)
Honors night classes availability
How this experience has improved my life
I had several Prof during my time @ Collin that did not have an office
I would have fared better studying solely for the certifications and not have wasted two years earning a degree, because employers don't care about your junior college degree.
I would of liked to have seen groups created to help the student achieve their certifications, as the material for the certs are different than the classroom materials.
Information regarding program
Instructor quality and support
Instructor's innovation in class
Instructor's knowledge level
Interactions within group work
Inter-department communication
international office advisor
international office service
international office staff
International student financial aid
Interpretation
Introductory classes are discouraging because the professors favor those students who are already capable and anyone who is not up to speed with technology are dismissed.
Kat Balch impact on my success
Knowledgeable academic advisors

Table A.

Continued...

Knowledgeability of professors

Lack of Professional Attitude by Employee (Jackie Carter)

Larger and more advanced projects in major field

Library

Like this survey, it feels like being rubber stamped to check a box in administrative goal to do list.

Liked the gym

Limited amounts of students in a classroom compared to universities.

LOVE COLLIN EXPERIENCE

Loved the experience

Meaningful engagement with world

Medic- Nursing Transition

meeting study areas

Music - Field of Study

Music professors

Night/weekend classes

Non-Traditional Student Support

Not understanding student's life situation

Offer health insurance to students

Office of Disability Service Quality

organization of registrars

Organizations for adult students retraining for 2nd career

Organizations for older adult students

other professors willing to help even if they do not teach that subject

Overall Quality of life on campus

Parking (4)

Payment structure

Pearson Lab

Preparation for career

Preparedness of instructors in the EMS Program

Professionalism of Teachers

Professor evaluations feedback

professors encouragement

Protection and Safety from an attacking Professor

Quality and Relevancy (Publish Date) of Web Development Textbooks

Quality of assistance given

Quality of food options on campus

Quality of information learned

Quality of Instructors

Table A.

Continued...

Quality of program
Racial attitudes on campus.
Recreational Facilities
Relevancy of Required Courses to the Web Development field
Reliability of vending machines on campus
Research Opportunities
Resource Accessibility
Safety from an aggressive Professor
Several campus locations
Since most of these people have day jobs in these fields what could they have shared with their students.
Some of the instructors could care less about their students as they had their day jobs to deal with.
Sources used in teaching
Step to completing program
Student admin rapport
Student Life
Student Professor ratio
Student support regarding professor complaints
Study Areas
Teachers
Teachers' ability to teach
Teachers answering their emails
Team-based projects in major field
Tech heavy art classes are the worst intro classes because there is favoritism to those students who are already fluent in the technology.
Technical support
The last couple of classes were basically blow off and the instructors let us know they weren't a big deal.
The need for investigation into an aggressive act upon a student by a professor
Too many CCNA classes cancelled without informing student.
Treating students like adults
Tuition
Two teachers teaching one class (Firewalls and VPN's) had a dislike for each other.
Variety/selection of classes
Video Closed Captions
Weekend classes hybrid
Would have liked to see more student activities/groups
Writing center

APPENDIX B

Questionnaire

Table B. Questionnaire

B1. Items Presented to All Program Completers

Section I: Perceptions of Learning Outcomes

As you reflect on your time at Collin College, to what extent do you think your learning experiences there developed or strengthened your knowledge, skills, or abilities in the following Areas of Learning?

It is important to understand that you are not being asked to rate yourself or your current abilities within the following areas of learning. **Rather, you are being asked to share your perceptions about how much your learning experiences at Collin College contributed to developing or strengthening your knowledge, skills, or abilities.**

The items listed on the left are various areas of learning. Please use the 4-point scale on the right to indicate how your experience at Collin had an effect on each area of learning where:

1=had no effect on my knowledge, skills, or abilities in this area

4=greatly developed and strengthened my knowledge, skills, or abilities in this area

Areas of Learning

	1	2	3	4
Innovate and think creatively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perform accurate calculations and explain their use in real-world problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connect choices, actions, and consequences to ethical decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gather, organize, and evaluate evidence addressing a practical problem in a work or community setting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effectively develop, interpret, and express ideas through written communication.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effectively develop, interpret, and express ideas through oral communication.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effectively develop, interpret, and express ideas through visual communication.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaborate with others to produce work that draws on knowledge from at least two academic subject areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B2. Items Presented to AAS Degree or Certificate Completers

Please use the 4-point scale on the right to indicate how your experience at Collin had an effect on each area of learning where:

1=had no effect on my knowledge, skills, or abilities in this area

4=greatly developed and strengthened my knowledge, skills, or abilities in this area

Areas of Learning

	1	2	3	4
Explain the scope and principal features of my major field of study including theories and practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define and properly use the current terminology in my major field of study.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate proficiency in the use of tools, technologies, and methods within my major field of study.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use ideas, concepts, designs, or techniques from my major field of study to design a project that addresses a familiar but complex problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Master entry-level workplace skills necessary to embark on my chosen occupation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organize and process symbols, pictures, graphs, objects, and other information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate a high level of effort and perseverance toward goal attainment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Believe in my own self-worth and maintain a positive view of myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate understanding, friendliness, adaptability and empathy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set personal goals, monitor progress, and exhibit self-control to attain those goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select goal-relevant activities, prioritize them, and prepare and follow schedules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepare and use budgets, make forecasts, keep records, and make adjustments to meet objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquire, store, allocate, and use materials and space efficiently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teach workplace skills to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work well with men and women from diverse backgrounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compare and select the most appropriate procedures, tools, equipment or technologies in the workplace.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effectively use computers, mobile devices, or specialized equipment or technologies in the workplace.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain and troubleshoot equipment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Satisfy customers' expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locate, understand, and interpret written, oral, and visual information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use effective listening and observational skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply effective decision making skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize problems and devise and implement a plan of action.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use logic to draw conclusions from available information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use efficient learning techniques to acquire and apply new knowledge and skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B3. Items Presented to Associate's Degree or Core Curriculum Completers

Please use the 4-point scale on the right to indicate how your experience at Collin had an effect on each area of learning where:

1=had no effect on my knowledge, skills, or abilities in this area

4=greatly developed and strengthened my knowledge, skills, or abilities in this area

Areas of Learning

	1	2	3	4
Describe how knowledge or practice is developed, tested, and revised in the sciences, social sciences, humanities, and arts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examine and describe perspectives on key debates within a variety of subject areas and in society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize and apply methods to solve a problem or complete a task from the sciences, social sciences, humanities, or arts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Describe the ways in which at least two subject areas define, address, and justify a problem that is important to society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyze, evaluate, and synthesize ideas, concepts, theories, and practical approaches to problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Describe how cultural perspectives could affect interpretations of a problem in the arts, politics, or global relations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Write substantially error-free prose that communicates effectively to specific audiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply learning from the classroom to real-world problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyze a significant concept or method in class based on learning that occurred outside the classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify alternate approaches to addressing practical problems in a work or community setting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Describe my own social and cultural background, including origins, development, assumptions, and predispositions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Describe historical and contemporary positions on democratic values and practices, and present my position on a related problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take an active role in local, regional, national, or global communities and examine social issues encountered and insights gained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize, analyze, interpret, and understand observable facts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generate informed conclusions based on numerical data and observable facts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B4. Items presented to AA or AS degree or Core Curriculum Completers

Please use the 4-point scale on the right to indicate how your experience at Collin had an effect on each area of learning where:

1=had no effect on my knowledge, skills, or abilities in this area

4=greatly developed and strengthened my knowledge, skills, or abilities in this area

Areas of Learning

	1	2	3	4
Appropriately cite multiple information sources from different media in projects, papers, or presentations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Translate verbal problems into mathematical form, and accurately construct and solve them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effective discussion skills with specific audiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand my own perspectives on important issues, how my perspectives evolved, and how they may differ from the views of others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply ethical principles or frameworks to social or personal problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generate reasonable interpretations of numeric information, and understand calculations used to arrive at those interpretations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Effective negotiation skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Master practical skills in the classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand and take positions on international economic, environmental, or public health challenges.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaborate in developing and implementing an approach to a civic issue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B5. Learning Support Environment Items: Presented to All Program Completers

Section II: Learning Support Environment

The items listed in the center column below, identify various aspects of student support at Collin College that are intended to enhance, reinforce, or sustain students' learning experiences and environments.

On the left, please tell us how satisfied you were with each aspect of student support. If you had no experience with a given aspect of student support, select "6=no experience."

On the right, please tell us how important each aspect of student support was for you. If you have no opinion about a given aspect, select "6=no opinion."

<u>Satisfaction</u> 1=very dissatisfied 5=very satisfied							<u>Importance</u> 1=very unimportant 5=very important						
1	2	3	4	5	6 = no experience		1	2	3	4	5	6 = no opinion	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		1. Academic Advising Accuracy of Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		2. Academic Advising Service Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Access to Administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Admission to the College	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Registration for Classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Bookstore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Career Counseling Help with Job Placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Career Counseling Service Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		9. Access to College Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		10. College Web Site Navigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		11. Usefulness of Information on College Website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		12. Computer Labs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Access to Instructors outside Class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Instructors' Concern about Individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<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. Opportunities for Informal Dialog with Instructors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

● ● ● ● ● ●	●	16. Financial Aid Availability of Funds	● ● ● ● ● ●	●
● ● ● ● ● ●	●	17. Financial Aid Service Quality	● ● ● ● ● ●	●
● ● ● ● ● ●	●	18. Access to Information Technology	● ● ● ● ● ●	●
● ● ● ● ● ●	●	19. Instructional Tech Support	● ● ● ● ● ●	●
● ● ● ● ● ●	●	20. Library Resource Availability	● ● ● ● ● ●	●
● ● ● ● ● ●	●	21. Library Service Quality	● ● ● ● ● ●	●
● ● ● ● ● ●	●	22. Overall Classroom Instructional Quality	● ● ● ● ● ●	●
● ● ● ● ● ●	●	23. Overall Lab Instructional Quality	● ● ● ● ● ●	●
● ● ● ● ● ●	●	24. Support Services for Transferring to Universities	● ● ● ● ● ●	●
● ● ● ● ● ●	●	25. Student Activities/Student Life	● ● ● ● ● ●	●
● ● ● ● ● ●	●	26. Student Complaint Processes	● ● ● ● ● ●	●
● ● ● ● ● ●	●	27. Student Organizations	● ● ● ● ● ●	●
● ● ● ● ● ●	●	28. Testing Services	● ● ● ● ● ●	●
● ● ● ● ● ●	●	29. Tutoring & Other Learning Support Services	● ● ● ● ● ●	●
● ● ● ● ● ●	●	30. Campus Safety and Security	● ● ● ● ● ●	●
● ● ● ● ● ●	●	31. College Buildings and Facilities	● ● ● ● ● ●	●
● ● ● ● ● ●	●	32. Access to Online Services	● ● ● ● ● ●	●
● ● ● ● ● ●	●	33. Quality of Online Services	● ● ● ● ● ●	●

B6. Invitation to Add Ratings of Learning Support Areas Not Included Above

If there are any other aspects of student support that were important to you, but were not included in the list on the previous page, please list and rate them below.

<u>My Level of Satisfaction</u> 1=very dissatisfied 5=very satisfied						<u>Importance to Me</u> 1=very unimportant 5=very important				
1	2	3	4	5		1	2	3	4	5
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<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. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<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. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<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. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<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. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<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. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<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. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IF YOU ARE READY TO SUBMIT YOUR RESPONSES, PLEASE CLICK ON THE SUBMIT BUTTON BELOW.

If you have any questions about the survey or experience problems submitting your responses, please email smirza@collin.edu.