General Education Assessment Working Plan

Tidewater Community College

Fall 2017

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I. Introduction: General Education Core Competencies at TCC

In 2006, the State Board for Community Colleges, the governing body of the Virginia Community College System, approved in policy seven general education competency areas to include: Communication (oral and written)[1], Information Literacy, Critical Thinking, Cultural and Social Understanding, Personal Development, Quantitative Reasoning, and Scientific Reasoning (Appendix A). General education competencies apply to all graduates in both transfer and career and technical degree programs (Appendix B). Further, and per Virginia Community College System Policy 5.0.2.0, "general education is that portion of the collegiate experience that addresses the knowledge, skills, attitudes, and values characteristic of educated persons…unbounded by disciplines and [it] honors the connections among bodies of knowledge."

Given that graduates of transfer and career and technical degree programs are expected to develop in all competency areas, the college is committed to identifying one or more competencies that shall be developed for each course offering. Once identified by faculty, each faculty member teaching the course is required to fully incorporate one or more course activities that will facilitate and support student development of the agreed-upon competency.

II. General Education Assessment (GEA) Planning and Development

A. Role of Assessment of General Education Core Competencies

Assessment of general education core competencies is critical to the college's mission and for accreditation purposes, as recognized in 3.5.1 by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

B. Role of Faculty in Developing, Implementing, and Maintaining GEA Plan

In August 2010, TCC was one of twelve community colleges selected by

[1] The State Board for Community Colleges defined Communication as a single competency that incorporates both oral and written communication. In May 2012, TCC faculty recommended that the Communication competency be divided into two distinct areas (oral and written communication) for assessment purposes.

Association of American Colleges and Universities (AAC&U) to lead the "Roadmap Project" initiative funded by MetLife Foundation. The purpose of this initiative is to aid institutions in creating proactive programs of academic support that are tied to expected learning outcomes. TCC sought assistance from AAC&U in developing and implementing its GEA initiative.

During 2011-12, the Vice President for Academic Affairs and Chief Academic Officer (hereafter referred to as Vice President) recruited 15 faculty members to serve as assessment coaches with responsibilities to engage faculty in the GEA process. During fall 2012, the assessment coaches were collectively designated as a subcommittee of the Instruction Committee.

In spring 2012, TCC chose the AAC&U Value Rubrics for use in the assessment of its general education competencies. These rubrics are the framework TCC is using to assess cumulative learning outcomes in general education competency areas versus content mastery for a course—a major shift for TCC faculty. Nearly 200 faculty members were introduced to this concept in May 2012 at the college's annual *Learning Institute*. At this meeting, faculty also adapted VALUE Rubrics for Written Communication, Oral Communication, and Information Literacy (Appendix C).

A preliminary five-year assessment schedule was drafted in fall 2012, shared with faculty at Convocation, reviewed by existing governance committees under the leadership of the Instruction Committee, and eventually finalized. Further, at a follow-up *Learning Institute* in October, 75 faculty participated in adapting rubrics created by AAC&U for Quantitative Reasoning and Critical Thinking as well as developing an original rubric for Scientific Reasoning.

During fall 2012, 40 faculty volunteers completed training to assess student learning in Written Communication and Information Literacy. The faculty assessors, some of whom already participated, also completed training in spring 2013 to assess student learning in Critical Thinking, Scientific Reasoning, and Quantitative Reasoning. During the 2012-13 academic year, 64 assessors evaluated student learning in five general education competency areas: Written Communication, Information Literacy, Critical Thinking, Scientific Reasoning, and Quantitative Reasoning.

In May 2013, 160 faculty attended the *Learning Institute*. Unlike the previous learning institutes that focused on theory and the basic concepts of general education assessment, there was a purposeful movement to application-based workshops and presentations. At the *Learning Institute*, student learning findings from assessment of Written Communication and Information Literacy were shared. Faculty were also given hands-on experience in assessing a student work product (SWP) for student learning in Written Communication. Multiple workshops were offered to assist faculty in developing assignments to foster student learning in many of the competency areas. Finally, faculty developed the college's Personal Development rubric which was finalized in fall 2013.

TCC was asked during summer 2013 to continue its participation in the Roadmap Project by serving as a mentor institution to one of the ten newly selected community colleges. Additionally, the college was awarded a grant to address the following core questions:

1) How does learning, as a defining element of our campus culture, support the psychosocial development of our students (how does the epistemic connect to the eudemonic)?
2) How and why does an intentional commitment to the psychosocial development of all our students positively affect their learning and civic engagement?

Because of the grant, in fall 2014, TCC faculty in health-related fields attended an interactive workshop on the best practices for curricular infusion of content related to cultural and socioeconomic factors that influence an individual's experiences with the healthcare system. Participants developed inter-professional assignments that aligned with the Cultural and Social Understanding rubric. The Office of Intercultural Learning webpage provides resources and assignments generated from this workshop.

General education assessment continued to be the primary focus of the May 2014 *Learning Institute*. Assessment consultant Linda Suskie was hired to review the college's draft general education assessment plan along with findings through fall 2014, and was the featured speaker at this May 2014 event. Large and small group exercises were conducted to aid the participating faculty in developing assignments to help students achieve course learning outcomes while also developing them in the general education competency areas. Faculty interested in serving as assessors completed training.

In spring 2015 work continued with AAC&U's grant as TCC faculty and staff at the Sentara Center for Simulation & Immersive Learning at Eastern Virginia Medical School developed a co-curricular standardized patient program that supports student learning by advancing the psycho-social well-being of students by actively involving them beyond the classroom.

Two hundred eighty (280) faculty attended the 2015 *Learning Institute* and self-selected introductory, intermediate, or advanced assessment workshops based on their experience with and understanding of the GEA. Learning outcomes included creating meaningful teaching applications for developing competencies and employability skills. Dr. Kathryne McConnell, Director of Assessment at Virginia Polytechnic Institute and State University, was the featured speaker at the *Learning Institute*. A discussion panel including representatives from local employers and Old Dominion University focused on the application of general education competencies to employability skills. Faculty reviewed applicable general education competencies on course outlines and adjusted supported competencies as necessary during discipline meetings on Day 2 of the Institute. Also on Day 2, faculty attended professional development sessions offered on 21 general education assessment and pedagogy topics.

Charlie Blaich and Kathleen Wise from the Wabash Center of Inquiry presented the Keynote "Prove Your Worth by Improving Your Work: What the Wabash National Study Tells Us about Assessment and Improving Student Learning" at the 2016 *Learning Institute*. The Wabash team also presented "Tips, Tricks and Techniques for Using Data to Improve Student Learning" in preparation for faculty work sessions focused on understanding and using the assessment results. Faculty completed the annual review and adjustment of applicable general education competencies on course outlines during discipline meetings on Day 2 of the Institute. Also on Day 2, faculty attended professional development sessions on 15 general education assessment and pedagogy topics.

Seventeen (17) interested faculty attended a session to collaborate on revisions to the Critical Thinking rubric and 20 attended a session for the Scientific Reasoning rubric at the May 2017 *Learning Institute.* These sessions continued the work begun by a dedicated group of faculty who used GEA results to inform improvements to the rubrics during work sessions earlier in the term. In fall 2017, five experienced faculty assessors scored subsamples of

the spring 2017 sample for Scientific Reasoning and the fall 2016 sample of Critical Thinking for both the Student Learning and Assignment Design tracks of the GEA using the revised rubrics. Results were presented to the Instruction Committee and the faculty who participated in the rubric revisions.

C. Development of the Pilot and Plan

Academic Services developed a preliminary plan and assessment schedule which was approved by the Instruction Committee in fall 2012. Based on findings and lessons learned during the pilot, Academic Services revised the plan during summer 2013.The Instruction Committee recommended the more extensive revised plan in spring 2014.

III. Student Learning

A. Student Learning Rotation

The GEA evaluated each competency twice by spring 2016 (Table 1).

Table 1 illustrates the Student Learning competency rotation through the first two assessments of each competency.

Table 1

Student Learning Competency Rotation – Phase One

Competency	12-13	13-14	14-15	15-16
Written Communication	FALL		FALL	
Oral Communication		FALL[2]		FALL[3]
Critical Thinking	SPRING	SPRING		
Cultural/Social Understanding		FALL		FALL
Information Literacy	FALL		FALL	
Quantitative Reasoning	SPRING		SPRING	
Scientific Reasoning	SPRING		SPRING	
Personal Development		SPRING		SPRING

[2] SWPs for fall 2013 assessment were collected in summer 2013.

[3] Twenty-one (21) of the 125 students in the sample were identified from summer 2015 sections of the selected course(s).

Beginning spring 2016, one competency was assessed during each cycle. A full rotation through all competencies will be completed in a four-year period (Table 2). The slower rotation allows more time for analysis and discussion of data to inform and implement change to support student learning.

Table 2 illustrates the Student Learning competency rotation for Phase Two.

Table 2

Student Learning Competency Rotation – Phase Two

Competency	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
Written Communication		FALL				FALL		
Oral Communication			FALL				FALL	
Critical Thinking	FALL				FALL			
Cultural/Social Understanding				FALL				FALL
Information Literacy			SPRING				SPRING	
Quantitative Reasoning		SPRING				SPRING		
Scientific Reasoning	SPRING				SPRING			
Personal Development				SPRING				SPRING

B. Student Learning Sampling

Through spring 2015, assessment coaches recommended courses for inclusion in the sample. Beginning fall 2015, the course selection pool for the Student Learning sample includes all courses identified in the College Catalog as meeting the general education core requirements for degrees or certificates which support the applicable competency as indicated on the Official Course Outline in i-INCURR.

Office of Institutional Effectiveness (OIE) completes a two-fold process ensuring the selected courses: 1) support the competency under study as

indicated on Official Course Outlines in i-INCURR; and 2) include a significant number of enrollees with 30 or more credits at TCC from both degree types (career/technical and transfer) who are representative of TCC's degree-seeking population, and are offered in a variety of course formats (traditional, hybrid, online) (Appendix D). Students selected for inclusion during the Phase One rotation were those who had earned 30 or more academic credits and were identified for participation by OIE through a stratified random sample process. Beginning spring 2016, students selected for inclusion are those who have earned 45 or more academic credit hours versus 30 to assess students who are closer to graduation[4].

Uncertain of what to expect regarding the faculty response rate, student attrition, and the appropriateness of the SWPs submitted, Academic Services requested that OIE randomly select 75 students for inclusion in the pilot with the goal of collecting and assessing 50 SWPs per competency. Sample size increased to 125 students in spring 2014, with the goal of collecting and assessing 100 SWPs per competency. Sample size increased to 141 for spring 2016, with the goal of collecting and assessing 100 SWPs per competency and cycle based on the average percentage of accessible assignments from previous cycles. Beginning Fall 2016, the sample increased to 282 with the goal of collecting and assessing 200 SWPs.

C. Student Learning Methods

Through spring 2015, prior to each semester, Academic Services contacted faculty whose classes were selected for inclusion to inform them of course inclusion and general expectations. Beginning fall 2015, Academic Services notifies all faculty of the competency under assessment and faculty responsibilities for the upcoming cycle. Once the tuition deadline date passes for classes to adjust for student attrition, OIE submits a list of selected students to Academic Services. Academic deans contact faculty members informing them of students selected for inclusion along with detailed instructions for submitting the SWP(s). Beginning fall 2015, faculty of selected students complete the Authentic Assignment Tool (AAT) form prior to submitting SWPs. The AAT guides faculty through selecting assignments which are authentic and embedded as requirements for all

[4] If a representative sample cannot be obtained with students who have earned 45 or more credit hours, the college reverts to the sampling of students with 30 or more credit hours.

students enrolled in the applicable classes and which prompt students to demonstrate each dimension of the applicable competency. The average level of performance faculty members expect their students to achieve on each dimension is collected via the AAT. Individual feedback on the choice of assignment(s) is provided to faculty by Academic Services. Upon receipt of each SWP, Academic Services removes all student, course, and faculty identifiers before assessment to protect anonymity.

Two assessors assign scores for each SWP by dimension as follows: 4 (exemplary), 3, (proficient), 2 (developing), 1 (emerging), 0 (not demonstrated), and NA (not demonstrated and not applicable to/required by assignment). When the score differential between the two assessors is one or less, the two scores are averaged resulting in the student's final score for the dimension. If scores differ by more than one on any dimension, a third assessor scores the SWP. The third scores are included in the average for the dimension score[5]. A third assessor also scores the SWP when one of the first two assessors submits a numerical score and the other submits an NA score. If the third assessor submits a numerical score, the two numerical scores are averaged for the student's final dimension score. If the third assessor submits an NA score, the student's final dimension score is NA. Beginning Fall 2013, assessors access assignments and enter scores electronically at a group scoring session and/or remotely at their convenience.

OIE analyzes scores for each competency to arrive at an overall mean score (overall score), for possible rating on a scale from 0 to 4 or NA, on each dimension and two independent mean scores for comparison of students in career and technical degree programs and transfer degree programs (Appendix E).

[5] When a third assessor is needed for any dimension, the third assessor's scores are included in the computations for average scores on all dimensions.

D. Student Learning from Findings First Assessment of Competencies (Pilot)

1. Student Learning in Written Communication in Fall 2012

Of the 50 SWPs assessed for Written Communication, 15 required review by a third assessor. Students' greatest strength in Written Communication was on the Context of and Purpose for Writing dimension. Students need most assistance in the Sources and Evidence area. The Sources and Evidence dimension received the most NA scores indicating that assignments included in this cycle required this learning outcome least consistently (Table 3).

Table 3 illustrates student performance on the Written Communication learning outcome.

Table 3

Written Communication Average Score as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2012

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Context of and Purpose Writing	2.20 (.90) *N*=50	2.30 (1.08) *N*=23	2.13 (.72) for *N*=27
Content Development	1.87 (.85) *N*=50	1.91 (.93) *N*=23	1.82 (.80) *N*=27
Genre & Disciplinary Conventions	1.95 (.64) *N*=49	1.89 (.89) *N*=22	1.98 (.67) *N*=27
Sources and Evidence	1.73 (1.00) *N*=28	1.63 (.86) *N*=12	1.81 (1.15) *N*=16
Control of Syntax and Mechanics	1.86 (.68) *N*=50	1.94 (.92) *N*=23	1.78 (.75) *N*=27

2. Student Learning in Information Literacy Fall 2012

Of the 44 SWPs assessed for Information Literacy, 33 were reviewed by a third assessor. A third assessor was frequently called to review instances where one assessor assigned a score of "NA" and the other assigned a numerical score.

Students demonstrated the greatest need of development in the Evaluation of Information and its Sources dimension for the Information Literacy competency (Table 4). This was comparable with the results for the Written Communication competency, where the data showed a weakness in the Sources and Evidence dimension. With an overall mean value of 2.55 for determining the Nature and Extent of Information Needed dimension, it was apparent that this is an area of strength in terms of student learning.

Table 4 illustrates student performance on the Information Literacy learning outcome.

Table 4

Information Literacy as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2012

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Nature and Extent of Information Needed	2.48 (.83) *N*=33	2.39 (1.08) *N*=14	2.55 (.64) *N*=19
Access of Needed Information	1.98 (.71) *N*=25	1.94 (.58) *N*=9	2.00 (.82) *N*=16
Evaluation of Information and its Sources	1.67 (.77) *N*=27	1.60 (.78) *N*=10	1.71 (.81) *N*=17
Use Information Effectively	2.09 (.86) *N*=32	1.96 (1.19) *N*=11	2.17 (.68) *N*=21
Use Information Ethically and Legally	1.78 (.83) *N*=27	1.67 (.90) *N*=9	1.83 (.84) *N*=18

3. Student Learning in Critical Thinking Spring 2013

Fifty-eight (58) SWPs were collected for the assessment of student learning in Critical Thinking. Of the 58, 41 required the review of a third assessor because the scoring between the initial two reviewers differed significantly per scoring specifications.

SWPs scored higher overall and by degree type on the Explanation of Issues and Evidence dimensions (Table 5). Students need most assistance in the dimensions of Influence of Context and Assumptions and Student's Position/Perspective. Given that only 19 of the 58 SWPs collected could be used to assess student learning on the Solving Problems dimension, it appears that assignments did not require the demonstration of student learning in this area.

Table 5 illustrates student performance on the Critical Thinking learning outcome.

Table 5

Critical Thinking as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2013

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Explanation of Issues	1.98 (.72) *N*=56	1.91 (.57) *N*=20	2.02 (.79) *N*=36
Evidence	1.67 (.63) *N*=52	1.87 (.69) *N*=17	1.57 (.58) *N*=35
Influence of Context and Assumptions	1.27 (.74) *N*=50	1.44 (.87) *N*=18	1.18 (.66) *N*=32
Student's Position/ Perspective	1.41 (.79) *N*=53	1.77 (.97) *N*=19	1.21 (.60) *N*=34
Conclusions and Related Outcomes	1.56 (.71) *N*=56	1.74 (.76) *N*=20	1.46 (.67) *N*=36
Solving Problems	1.43 (.75) *N*=19	1.71 (.76) *N*=7	1.26 (.73) *N*=12

4. Student Learning in Quantitative Reasoning Spring 2013

Of the 49 SWPs for Quantitative Reasoning, 40 required the review of a third assessor. Of the 49 SWPs collected for Quantitative Reasoning, only 21 could be assessed on the Communication dimension and only 11 were deemed as assessable for the Assumptions dimension.

Students' greatest strengths in terms of Quantitative Reasoning included Calculation and Communication dimensions. Application/Analysis and Assumptions dimensions were the areas in need of greatest development for students per data. Of the SWPs assessed, the Interpretation, Assumptions, and Communication dimension showed high levels of variance between students in career/technical and transfer programs, with students in the career/technical programs displaying higher levels of the competency dimensions than students in transfer programs (Table 6).

Table 6 illustrates student performance on the Quantitative Reasoning learning outcome.

Table 6

Quantitative Reasoning as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2013

		Curriculum type	
Dimension	Overall	Career/technical	Transfer
Interpretation	1.77 (.94) *N*=30	2.00 (1.00) *N*=13	1.59 (.87) *N*=17
Representation	2.02 (.87) *N*=42	2.06 (.93) *N*=18	1.99 (.84) *N*=24
Calculation	2.33 (.74) *N*=44	2.38 (.88) *N*=17	2.30 (.65) *N*=27
Application/Analysis	1.82 (.99) *N*=38	1.82 (.92) *N*=17	1.81 (1.07) *N*=21
Assumptions	1.59 (1.11) *N*=11	1.71 (1.29) *N*=7	1.38 (.85) *N*=4
Communication	2.13 (.91) *N*=21	2.26 (1.01) *N*=13	1.94 (.73) *N*=8

5. Student Learning in Scientific Reasoning Spring 2013

Of the 50 SWPs assessed for Scientific Reasoning, 33 required evaluation by a third assessor. Many could not be evaluated because the assignment did not require the student to develop and/or present the dimensions under study.

Students demonstrated greatest need of development on the Conclusions, Limitations, and Implications and Existing Knowledge, Research and/or Views dimensions. With an overall mean value of 1.81 for Methodology and 1.78 for Argument or Topic Selection, these dimensions show higher levels of student learning than the others (Table 7). However, all dimensions need improvement.

Table 7 illustrates student performance in the Scientific Reasoning learning outcome.

Table 7

Scientific Reasoning as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2013

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Argument or Topic Selection	1.78 (.81) *N*=29	2.00 (.80) *N*=8	1.69 (.81) *N*=21
Existing Knowledge, Research and/or Views	1.41 (.77) *N*=29	1.28 (.94) *N*=9	1.48 (.70) *N*=20
Methodology	1.81 (1.05) *N*=24	1.75 (1.13) *N*=6	1.83 (1.06) *N*=18
Analysis	1.62 (.81) *N*=29	1.57 (.79) *N*=7	1.64 (.83) *N*=22
Conclusions, Limitations and Implications	1.33 (.78) *N*=29	1.17 (.83) *N*=9	1.41 (.77) *N*=20

6. Student Learning in Oral Communication Fall 2013

Thirty-three (33) SWPs were collected for the assessment of Oral Communication learning outcomes. Of the 33, 13 required the review of a third assessor because the scoring between the initial two reviewers differed significantly per the scoring specifications.

Assessors scored all 33 SWPs submitted for Oral Communication on all dimensions. Students achieved the highest scores on the Central Message dimension, with an overall score of 2.21. TCC students need more development in the dimensions of Delivery and Supporting Material with overall scores of 1.81 and 1.75 respectively (Table 8). The Supporting Material and Language dimensions showed higher levels of variance between students in the career/technical and transfer programs, with students in the transfer programs displaying higher levels of the competency than the students in the career/technical programs.

Table 8 illustrates student performance in the Oral Communication learning outcome.

Table 8

Oral Communication Average Score as Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2013

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Organization	2.06 (.75) *N*=33	1.98 (.70) *N*=7	2.08 (.78) *N*=26
Language	2.12 (.56) *N*=33	1.83 (.36) *N*=7	2.20 (.59) *N*=26
Delivery	1.81 (.70) *N*=33	1.76 (.58) *N*=7	1.82 (.74) *N*=26
Central Message	2.21 (.69) *N*=33	2.31 (.47) *N*=7	2.18 (.75) *N*=26
Supporting Material and Implications	1.75 (.93) *N*=33	1.29 (.83) *N*=7	1.87 (.93) *N*=26

7. Student Learning in Cultural and Social Understanding Fall 2013

Fifty-five (55) SWPs were collected for the assessment of student learning in Cultural and Social Understanding. Of the 55, 52 required the review of a third assessor because the scoring between the initial two reviewers differed significantly per the scoring specifications.

Of the 55 SWPs submitted for Cultural and Social Understanding, 9 were scored for the Skills - Recognize the role of language in social and cultural contexts (Skills – Language) dimension, and 12 were scored for the Skills – Recognize the impact that arts and humanities have upon individuals and cultures (Skills – Arts) dimension. The remaining assignments did not instruct students to demonstrate the learning outcomes in these dimensions, and students did not spontaneously demonstrate these learning outcomes. Therefore, assessors marked these dimensions NA rather than assigning numerical scores. Further, there were no dimensions for this competency for which all SWPs submitted could be scored. The dimension with the most SWPs which could be scored was the Knowledge – Assess the impact that institutions have on individuals and culture (Knowledge – Institutions), for which 38 of the 55 SWPs required the demonstration of the dimension.

Students achieved the highest scores on the Knowledge – Describes their own as well as others' personal ethical systems and values (Knowledge – Ethical Systems) dimension, with an overall score of 1.80. TCC students need more development in the dimensions of Skills – Arts and Skills – Language with overall scores of 1.18 and 1.28 respectively (Table 9). The Skills – Language dimension showed a higher level of variance between students in career/technical and transfer programs, with students in the transfer programs displaying higher levels of the competency than the students in the career/technical programs.

Table 9 illustrates student performance in the Cultural and Social Understanding learning outcome.

Table 9

Cultural and Social Understanding Average Score as Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2013

Dimension	Overall	Curriculum type	
		Career/technical	Transfer
Knowledge - Institutions	1.43 (.57) N=38	1.38 (.50) N=19	1.49 (.64) N=19
Knowledge - Ethical Systems	1.80 (.54) N=31	1.89 (.34) N=14	1.72 (.67) N=17
Skills - Arts	1.18 (.59) N=12	1.29 (.58) N=4	1.13 (.62) N=8
Skills - Language	1.28 (.37) N=9	1.21 (.28) N=7	1.50 (.71) N=2
Skills - Interdependence	1.41 (.38) N=27	1.38 (.33) N=14	1.45 (.43) N=13

8. Student Learning in Personal Development Spring 2014

Forty-nine (49) SWPs were collected for the assessment of student learning in Personal Development. Of the 49, 42 required the review of a third assessor because the scoring between the initial two reviewers differed significantly per the scoring specifications.

Of the 49 SWPs collected for Personal Development, 45 were scored for the Decision-Making dimension and 43 were scored for the Personal Wellness dimension. Only 29 SWPs were scored for the Social and Interpersonal Development dimension. The remaining assignments did not instruct students to demonstrate the learning outcomes in these dimensions, and students did not spontaneously demonstrate these learning outcomes.

Students achieved the highest scores on the Decision-Making and Academic and Professional Goal-Setting dimensions with overall scores of 1.86 in each of these dimensions (Table 10). These two dimensions showed higher levels of variance between career/technical and transfer students than the other dimensions, with career/technical students performing better on the Decision-Making dimension and transfer students performing better on the Academic and Professional Goal Setting dimension. TCC students need more development in the dimensions of Social and Interpersonal Development and Personal Identity with scores of 1.55 and 1.60 respectively.

Table 10 illustrates student performance in the Personal Development learning outcome.

Table 10

Personal Development Average Score as Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses)

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Personal Wellness	1.76 (.64) N=43	1.79 (.66) N=18	1.74 (.64) N=25
Decision-Making	1.86 (.62) N=45	1.96 (.75) N=17	1.79 (.52) N=28
Academic and Professional Goal-Setting	1.86 (.77) N=41	1.75 (.80) N=17	1.93 (.76) N=24
Social and Interpersonal Development	1.55 (.87) N=29	1.60 (.61) N=13	1.50 (1.05) N=16
Personal Identity	1.60 (.64) N=38	1.67 (.46) N=14	1.56 (.73) N=24

9. Student Learning General Summary Findings from Pilot

Pilot findings offer a glimpse of student learning and provide benchmark "scores" for TCC students. Most importantly, the findings serve as a springboard for discussions with faculty and subsequent curriculum and pedagogical changes.

10. Student Learning Administrative Findings from Pilot

College officials responsible for collecting and preparing SWPs and notifying faculty of their responsibilities learned early on that these processes were arduous and could be accomplished more easily through automation. With support from the college's Office of Information Systems, an electronic application, the GEA Tool, was developed that allows SWPs to be scanned and randomly directed to two assessors for scoring. The GEA Tool, which automates much of the process and allows assessors to score SWPs at any time and from any computer, was launched in fall 2013.

Educating faculty about the initiative evolved into what the assessment coaches referred to as a "marketing blitz." Even after several opportunities to learn about the initiative, through various modes, some faculty seemed unaware and/or unclear of the initiative and its intent. Faculty who have been actively engaged in the process understand the reasoning behind the initiative and its importance. Faculty on the leading edge of this initiative need to be ambassadors to their colleagues and have greater visibility at the governance level.

Another lesson the college learned was that piloting the process was the right thing to do. Having a larger sample size would have compounded the arduous nature of this initiative. Once each general education competency was pilot tested and improvements made based on its first assessment round, the college increased the sample size to 125 with the goal of collecting and accessing 100 SWPs per competency each cycle.

Finally, through the pilot, the college learned that assignments required and submitted by faculty often did not adequately develop and/or direct students to demonstrate the competency dimensions under assessment. Without an ability to assess student learning in one or more dimensions, it is difficult to set benchmarks to affect change adequately.

E. Student Learning Findings from Second Assessment of Competencies

1. Student Learning in Critical Thinking Spring 2014

One hundred (100) SWPs were collected for the assessment of student learning in Critical Thinking. Of the 100, 77 required the review of a third assessor because the scoring between the initial two reviewers differed significantly per the scoring specifications.

Of the 100 SWPs collected for Critical Thinking, 94 were scored for the Explanation of Issues, Student's Position, and Conclusions and Related Outcomes dimensions. Ninety (90) were scored for the Influence of Context dimension. While the Solving Problems dimension continued to receive the most NA scores, the percentage of NA scores for this dimension decreased from 67% in spring 2013 to 34% in spring 2014 (Figure 1).

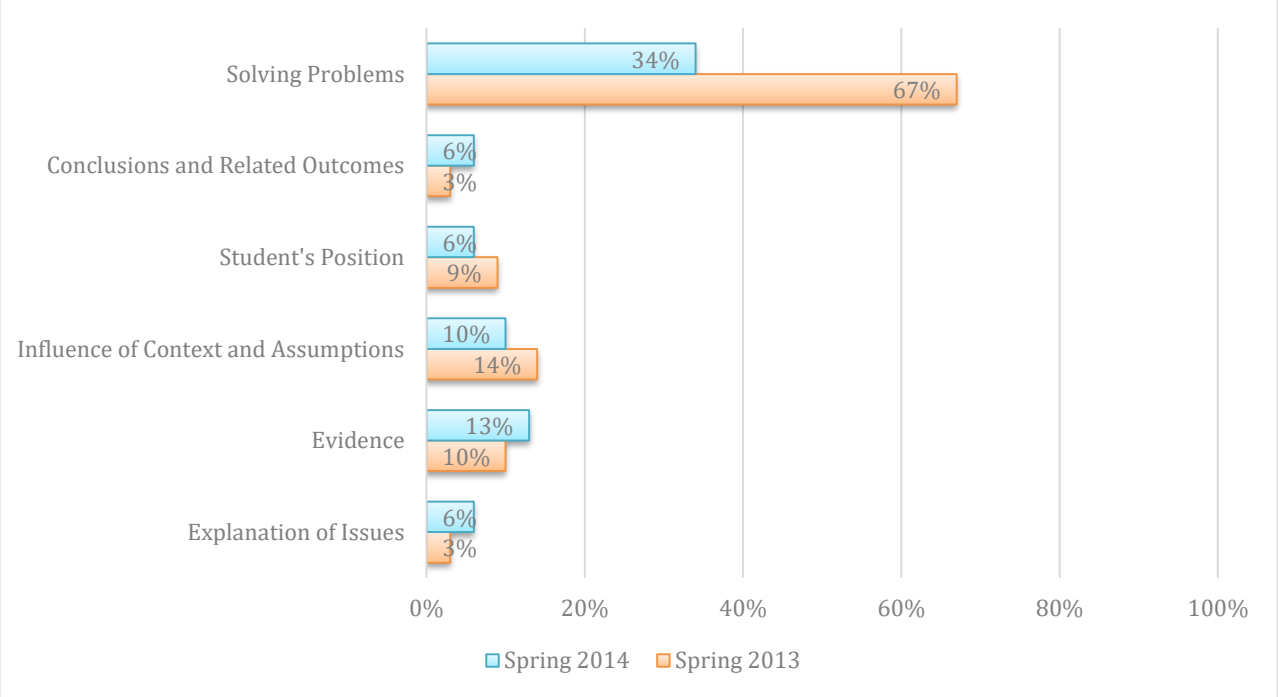


Figure 1. Comparison of percentage of SWPs assigned NA scores for Critical Thinking as a function of dimension and cycle through spring 2014

Students achieved the highest scores on the Explanation of Issues and Evidence dimensions with overall scores of 1.81 and 1.64 respectively (Table 11). Career/technical and transfer students demonstrated equal scores on these dimensions. Influence of Context and Assumptions and Student's Position were the dimensions with the lowest scores, 1.39

and 1.38 respectively. The most variation between scores for career/technical and transfer students was on the Solving Problems dimension with career/technical scoring higher than transfer students.

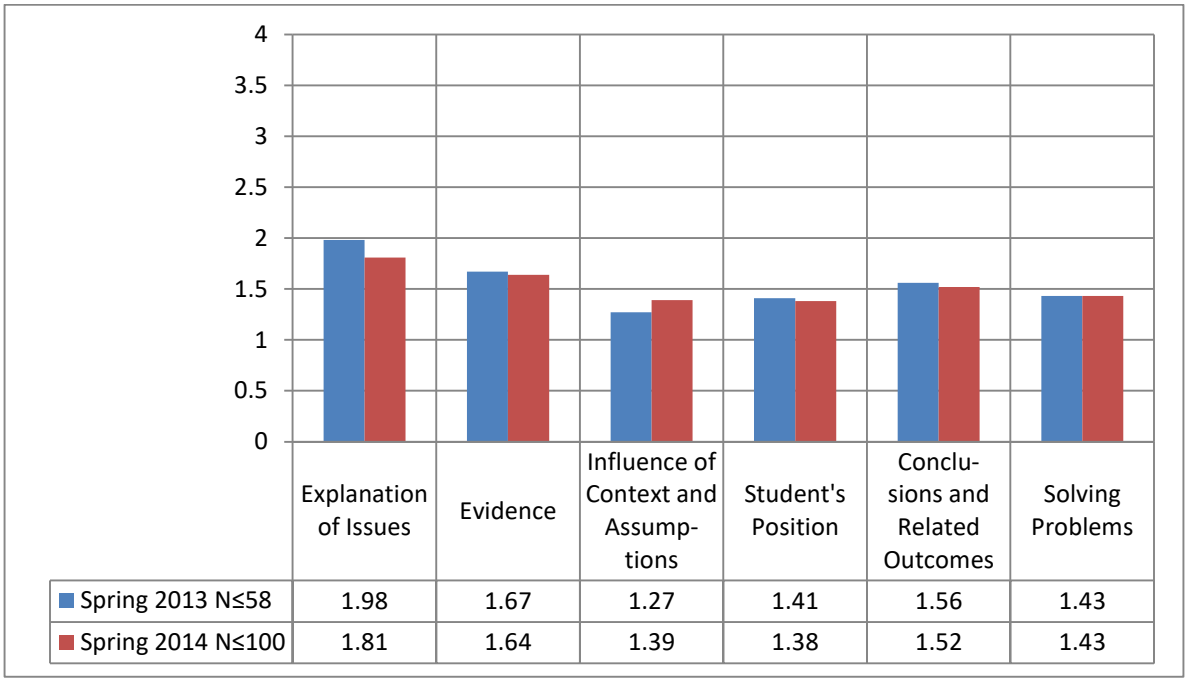
Table 11 illustrates student performance in the Critical Thinking learning outcome.

Table 11

Critical Thinking Average Score as Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2014

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Explanation of Issues	1.81 (.73) N=94	1.81 (.78) N=42	1.81 (.69) N=52
Evidence	1.64 (.68) N=87	1.64 (.81) N=38	1.64 (.56) N=49
Influence of Context and Assumptions	1.39 (.64) N=90	1.42 (.73) N=39	1.36 (.56) N=51
Student's Position -	1.38 (.66) N=94	1.45 (.75) N=42	1.33 (.57) N=52
Conclusions and Related Outcomes	1.52 (.63) N=94	1.58 (.78) N=42	1.46 (.48) N=52
Solving Problems	1.43 (.76) N=66	1.56 (.81) N=29	1.34 (.71) N=37

Overall scores for Critical Thinking in spring 2014 were similar to the scores from spring 2013 (Figure 2). Student scores were the highest on the Explanation of Issues dimension for both cycles and lowest on the Influence of Context and Assumptions and Student's Position dimensions.



	Explanation of Issues	Evidence	Influence of Context and Assump-tions	Student's Position	Conclu-sions and Related Outcomes	Solving Problems
Spring 2013 N≤58	1.98	1.67	1.27	1.41	1.56	1.43
Spring 2014 N≤100	1.81	1.64	1.39	1.38	1.52	1.43

Figure 2. Comparison of Critical Thinking overall score as a function of dimension and cycle through spring 2014

2. Student Learning in Written Communication in Fall 2014

Ninety-five (95) SWPs were collected for the assessment of student learning in Written Communication. Of the 95, 52 required review by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

All 95 SWPs collected for Written Communication were scored for the Context and Purpose for Writing, Genre and Disciplinary Conventions, and Control of Syntax and Mechanics dimensions. Only one SWP received an NA score for the Content Development dimension. While the Sources and Evidence dimension continued to receive the most NA scores, the percentage of NA scores for this dimension decreased from 44% in fall 2012 to 24% in fall 2014 (Figure 3).

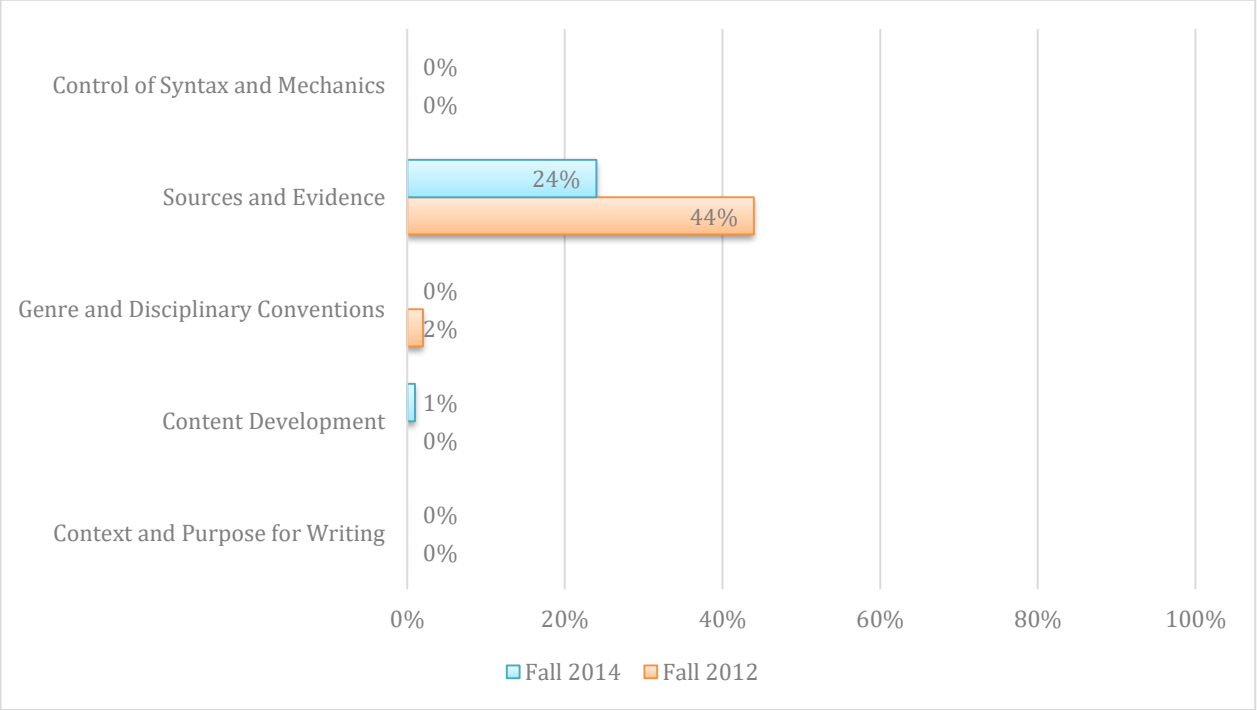


Figure 3. Comparison of percentage of SWPs assigned NA scores for Written Communication as a function of dimension and cycle through fall 2014

Students' greatest strength in Written Communication was on the Context of and Purpose for Writing dimension with an overall score of 2.33. Students' weakest dimensions were Genre and Disciplinary Conventions and Sources and Evidence with overall scores of 1.98 and 1.94 respectively (Table 12). Career/technical students achieved higher scores than transfer students on all dimensions. The most variation between scores for career/technical and transfer students was on the Context and Purpose for Writing dimension with career/technical students scoring .49 higher than transfer students.

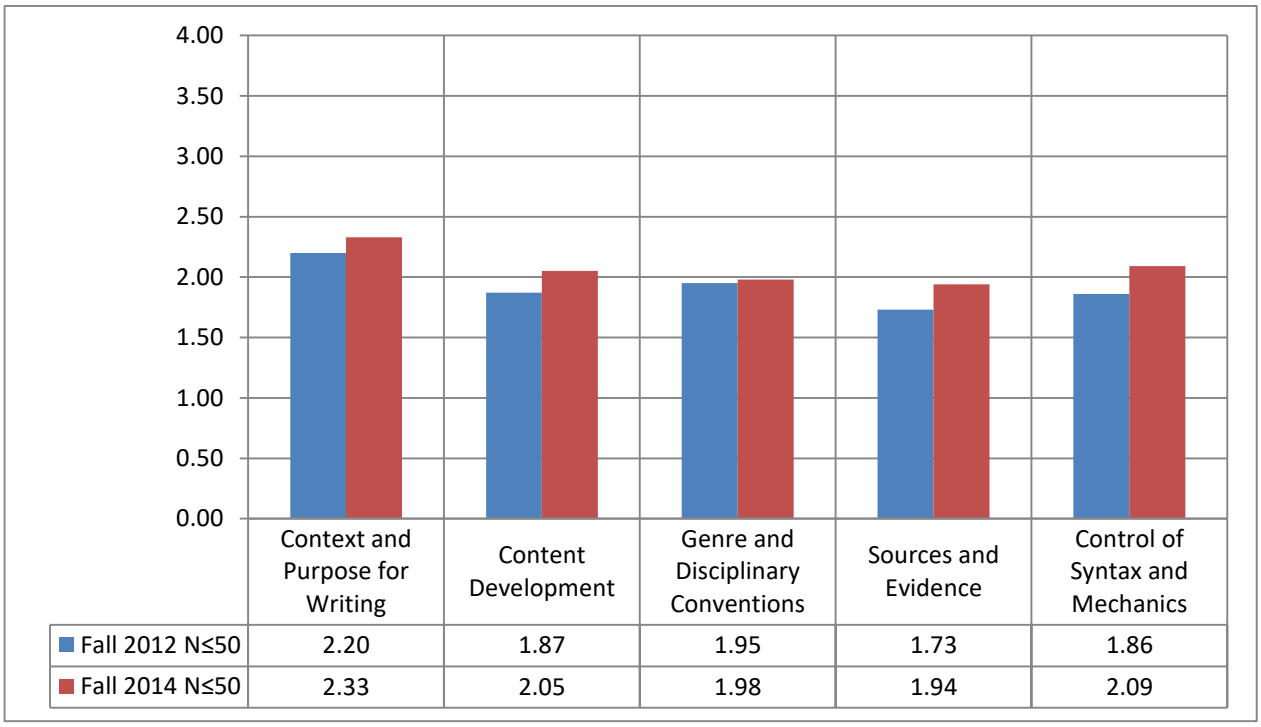
Table 12 illustrates student performance on the Written Communication learning outcome.

Table 12

Written Communication Average Score as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2014

Curriculum type			
Dimension	Overall	Career/technical	Transfer
Context of and Purpose Writing	2.33 (.82) *N*=95	2.61 (.65) *N*=42	2.12 (.88) for *N*=53
Content Development	2.05 (.83) *N*=94	2.26 (.73) *N*=42	1.87 (.87) *N*=52
Genre & Disciplinary Conventions	1.98 (.84) *N*=95	2.17 (.76) *N*=42	1.83 (.88) *N*=53
Sources and Evidence	1.94 (.89) *N*=72	2.10 (.82) *N*=31	1.81 (.92) *N*=41
Control of Syntax and Mechanics	2.09 (.76) *N*=95	2.25 (.64) *N*=42	1.96 (.82) *N*=53

Written Communication overall scores were higher in fall 2014 than in fall 2012 (Figure 4). Overall scores were the highest on the Context and Purpose of Writing dimension for both cycles and lowest on the Sources and Evidence dimension.



	Context and Purpose for Writing	Content Development	Genre and Disciplinary Conventions	Sources and Evidence	Control of Syntax and Mechanics
Fall 2012 N≤50	2.20	1.87	1.95	1.73	1.86
Fall 2014 N≤50	2.33	2.05	1.98	1.94	2.09

Figure 4. Comparison of Written Communication overall score as a function of dimension and cycle through fall 2014

3. Student Learning in Information Literacy Fall 2014

Eighty-nine (89) SWPs were collected for the assessment of student learning in Information Literacy. Of the 89, 63 required review by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

The number of NA scores ranged from 26 for both the Determine the Extent of Information Needed and the Access Needed Information dimensions to 36 for the Access and Use Information Ethically and Legally dimension. This indicates that from 29% to 40% of the SWPs could not be scored on a dimension because the assignment did not require the student to demonstrate the dimension. These percentages were comparable to the Information Literacy results from fall 2012 which showed that 25% to 43% of the SWPs could not be scored on at least one dimension (Figure 5). The Access Needed Information dimension showed the most change from the first rotation to the second with a decrease in percentage of NA scores from 43% in fall 2012 to 29% in fall 2014.

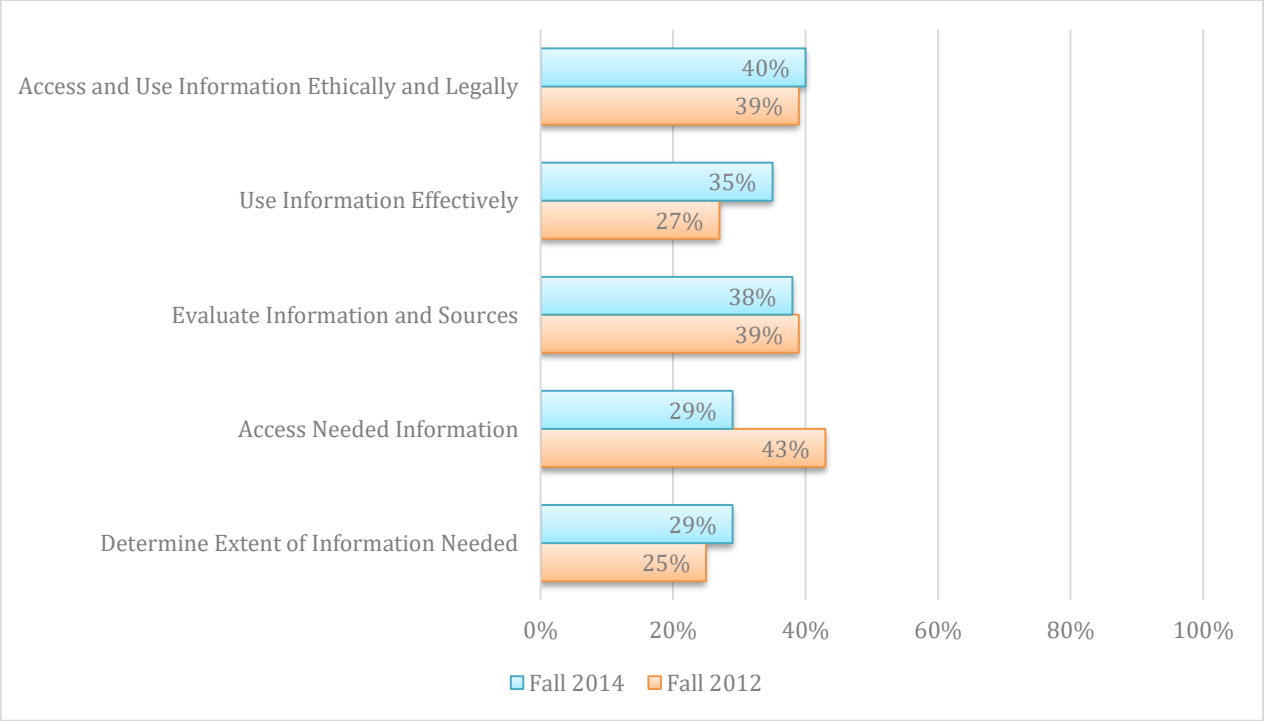


Figure 5. Comparison of percentage of SWPs assigned NA scores for Information Literacy as a function of dimension and cycle through fall 2014

Students achieved the highest scores on the Use Information Effectively and Access Needed Information dimensions with overall scores of 2.01 and 1.88 respectively. Students demonstrated the greatest need of development in the Access and Use Information Ethically and Legally dimension with an overall score of 1.21 (Table 13). Transfer students scored higher than career/technical students on all dimensions with the greatest variation on the Access Needed Information dimension with transfer students scoring .49 higher than career/technical students.

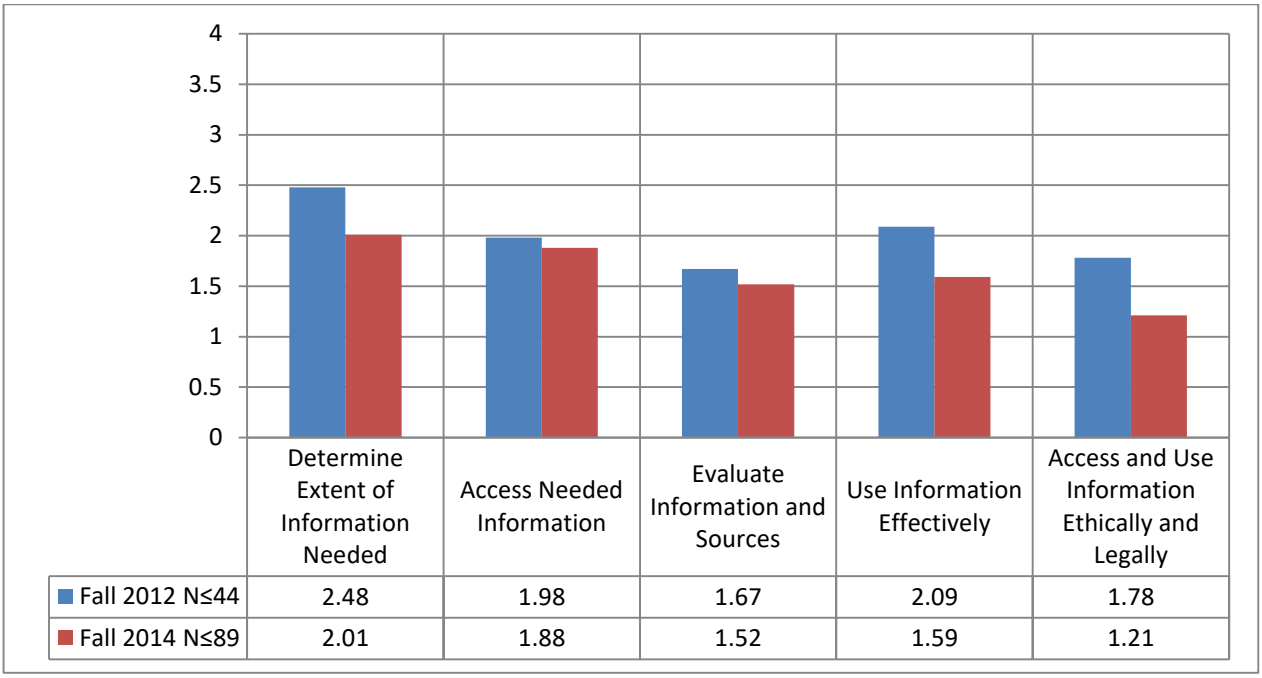
Table 13 illustrates student performance on the Information Literacy learning outcome.

Table 13

Information Literacy as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2014

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Determine Extent of Information Needed	2.01 (.80) *N*=63	1.83 (.82) *N*=25	2.12 (.78) *N*=38
Access Needed Information	1.88 (.77) *N*=63	1.58 (.77) *N*=22	2.05 (.73) *N*=41
Evaluation of Information and Sources	1.52 (.69) *N*=55	1.43 (.73) *N*=21	1.57 (.67) *N*=34
Use Information Effectively	1.59 (.79) *N*=58	1.42 (.83) *N*=21	1.68 (.75) *N*=37
Access and Use Information Ethically and Legally	1.21 (.72) *N*=53	1.05 (.68) *N*=19	1.30 (.73) *N*=34

Overall scores for the fall 2014 assessment of Information Literacy were lower on every dimension than overall scores for fall 2012 (Figure 6). Overall scores were highest on the Determine Extent of Information Needed dimension for both cycles, but the fall 2014 overall score was .47 lower than the fall 2012 overall score. The greatest variation between overall scores for the fall 2014 and 2012 was on the Access and Use Information Ethically and Legally dimension with a difference of .57 between the overall scores.



	Determine Extent of Information Needed	Access Needed Information	Evaluate Information and Sources	Use Information Effectively	Access and Use Information Ethically and Legally
Fall 2012 N≤44	2.48	1.98	1.67	2.09	1.78
Fall 2014 N≤89	2.01	1.88	1.52	1.59	1.21

Figure 6. Comparison of Information Literacy overall score as a function of dimension and cycle through fall 2014

4. Student Learning in Quantitative Reasoning Spring 2015

Sixty-nine (69) SWPs for Quantitative Reasoning were submitted from the 125 students in the sample. Of the 69 SWPs assessed, 57 required the review of a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

The Representation, Interpretation, and Calculation dimensions received the least NA scores. Of the 69
SWPs submitted, 61 were assessed for the Representation dimension and 59 were assessed for both the Interpretation and Calculation dimensions. The Assumptions dimension received the most NA scores for Quantitative Reasoning in spring 2015 with 29 NA scores; however, the percentage of NA scores for this dimension decreased from 76% in spring 2013 to 42% in spring 2015 (Figure 7).

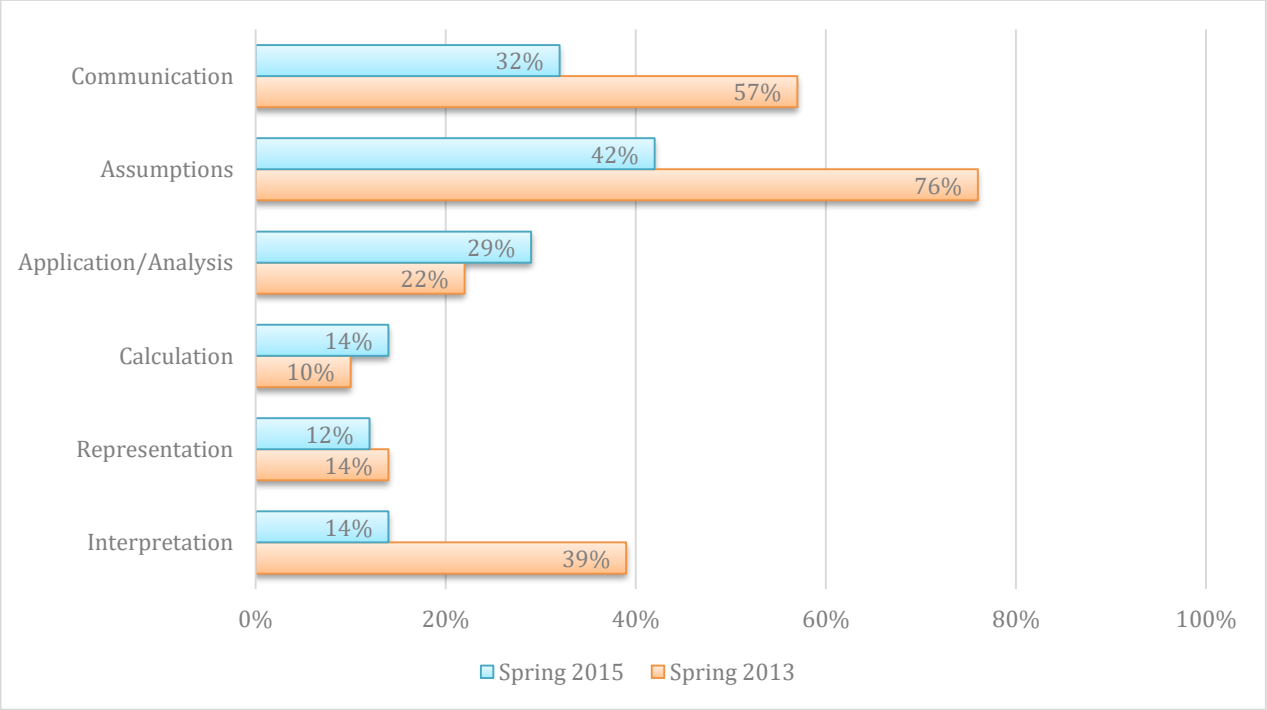


Figure 7. Comparison of percentage of SWPs assigned NA scores for Quantitative Reasoning as a function of dimension and cycle through spring 2015

Students achieved the highest scores on the Calculation and Communication dimensions with overall scores of 2.39 and 2.40 respectively (Table 14). Application/Analysis and Assumptions dimensions were the areas in need of greatest development with overall scores of 1.98 and 1.69 respectively. The Communication dimension showed the highest level of variance between students in career/technical and transfer programs, with students in the career/technical programs displaying higher levels of the competency dimensions than students in transfer programs.

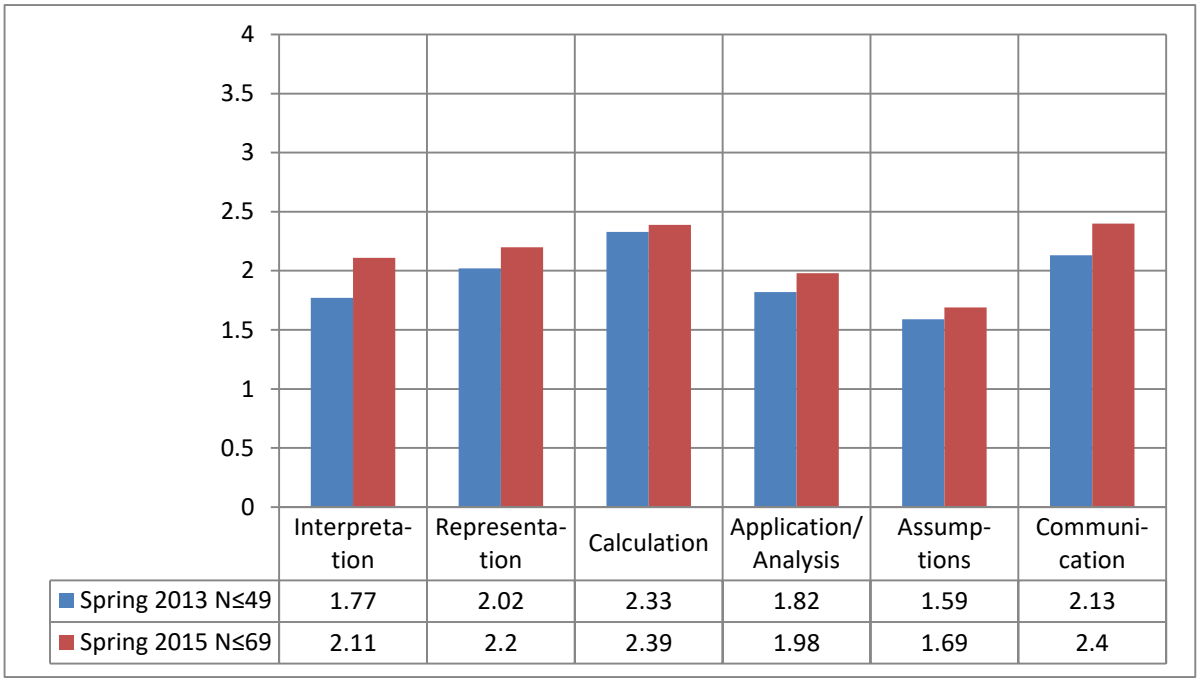
Table 14 illustrates student performance on the Quantitative Reasoning learning outcome.

Table 14

Quantitative Reasoning as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2015

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Interpretation	2.11 (.67) *N*=59	2.15 (.66) *N*=34	2.06 (.69) *N*=25
Representation	2.20 (.60) *N*=61	2.23 (.57) *N*=35	2.17 (.65) *N*=26
Calculation	2.39 (.63) *N*=59	2.40 (.63) *N*=34	2.38 (.63) *N*=25
Application/Analysis	1.98 (.62) *N*=49	2.04 (.60) *N*=32	1.88 (.66) *N*=17
Assumptions	1.69 (.62) *N*=40	1.68 (.63) *N*=26	1.72 (.63) *N*=14
Communication	2.40 (.64) *N*=47	2.52 (.56) *N*=30	2.18 (.72) *N*=17

Overall scores were higher in spring 2015 than spring 2013 in every dimension (Figure 8). Student scores were the highest on the Calculation and Communications dimensions for both cycles and lowest on the Application/Analysis and Assumptions dimensions. The greatest increases in overall scores were achieved in the Interpretation and Communication dimensions with increases of .34 and .27 points respectively.



	Interpretation	Representation	Calculation	Application/ Analysis	Assumptions	Communication
Spring 2013 N≤49	1.77	2.02	2.33	1.82	1.59	2.13
Spring 2015 N≤69	2.11	2.2	2.39	1.98	1.69	2.4

Figure 8. Comparison of Quantitative Reasoning overall score as a function of dimension and cycle through spring 2015

5. Student Learning in Scientific Reasoning Spring 2015

Ninety-eight (98) SWPs were submitted for the assessment of Scientific Reasoning. Of the 98 SWPs assessed, 65 required evaluation by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

Eighty-six (86) SWPs were scored for the Analysis dimension, and 85 were scored for the Methodology and Conclusions, Limitations and Implications dimensions. The Existing Knowledge, Research and/or Views dimension received the most NA scores with 33 SWPs that did not require the demonstration of the dimension. However, the percentage of NA scores for this dimension decreased from 41% in spring 2013 to 34% in spring 2015. The other dimensions of Scientific Reasoning showed even greater reductions in the percentages of NA scores with the Methodology dimension showing the greatest reduction with 37% less NA scores in spring 2015 than spring 2013 (Figure 9).

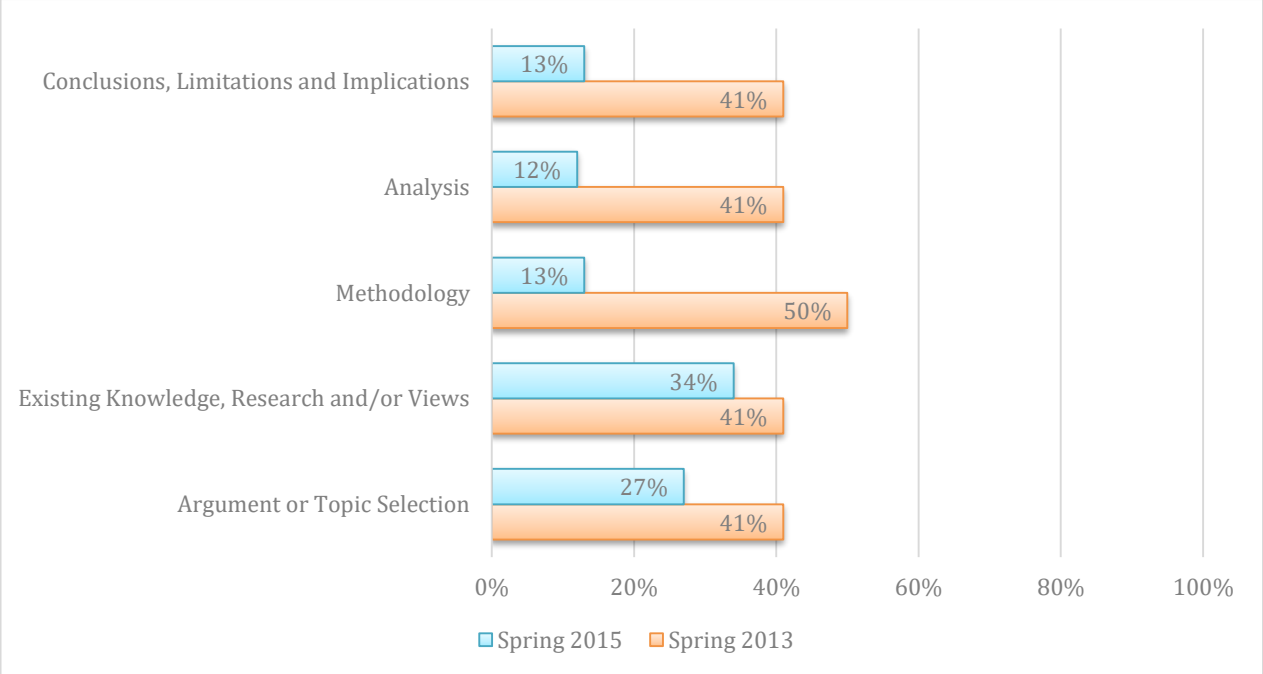


Figure 9. Comparison of percentage of SWPs assigned NA scores for Scientific Reasoning as a function of dimension and cycle through spring 2015

Students demonstrated greatest strength on the Methodology dimension with an overall score of 2.49. Students' lowest overall score was 1.78 on the Existing Knowledge, Research and/or Views Dimensions (Table 15). Career/technical students received higher scores than transfer students in all dimensions except Methodology.

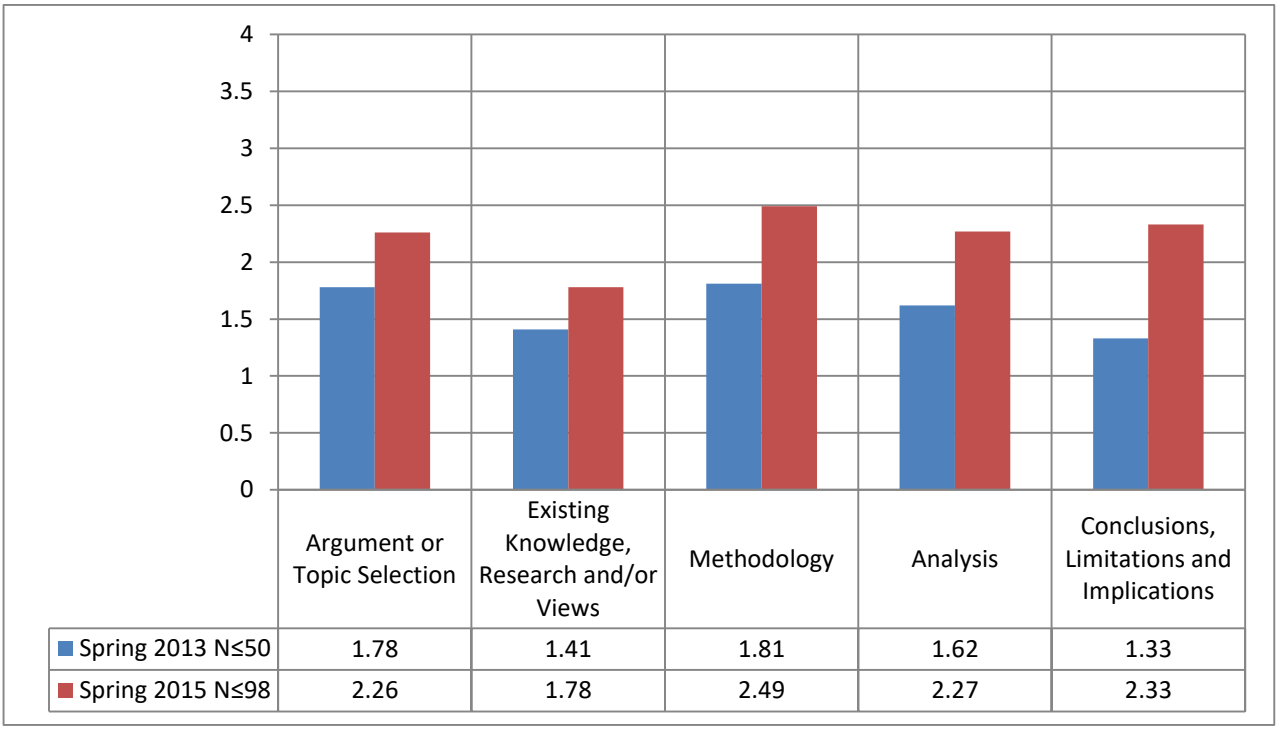
Table 15 illustrates student performance in the Scientific Reasoning learning outcome.

Table 15

Scientific Reasoning as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2015

		Curriculum type	
Dimension	Overall	Career/technical	Transfer
Argument or Topic Selection	2.26 (.75) *N*=72	2.42 (.71) *N*=32	2.13 (.76) *N*=40
Existing Knowledge, Research and/or Views	1.78 (.77) *N*=65	1.90 (.70) *N*=34	1.66 (.84) *N*=31
Methodology	2.49 (.68) *N*=85	2.47 (.67) *N*=42	2.51 (.70) *N*=43
Analysis	2.27 (.62) *N*=86	2.36 (.61) *N*=43	2.19 (.63) *N*=43
Conclusions, Limitations and Implications	2.33 (.66) *N*=85	2.45 (.60) *N*=40	2.22 (.70) *N*=45

The spring 2015 overall scores increased for all dimensions as compared to spring 2013 (Figure 10). The Conclusions, Limitations and Implications dimension showed the greatest increase from spring 2013 to spring 2015 with scores of 1.33 to 2.33 respectively.



	Argument or Topic Selection	Existing Knowledge, Research and/or Views	Methodology	Analysis	Conclusions, Limitations and Implications
Spring 2013 N≤50	1.78	1.41	1.81	1.62	1.33
Spring 2015 N≤98	2.26	1.78	2.49	2.27	2.33

Figure 10. Comparison of Scientific Reasoning overall score as a function of dimension and cycle through spring 2015

6. Student Learning in Oral Communication Fall 2015

Seventy-eight (78) SWPs were submitted for the assessment of Oral Communication. Of the 78 SWPs assessed, 44 required evaluation by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

Seventy-eight (78) SWPs were scored for the Language, Delivery, and Central Message dimensions, and 77 were scored for the Organization dimension. The Supporting Materials dimension received the most NA scores with 12 SWPs that did not require the demonstration of the dimension. These findings represent an increase in the percentage of NA scores for the Organization and Supporting Materials dimensions as compared to fall 2013 in which there were 0 NA scores for this and all other dimensions. (Figure 11).

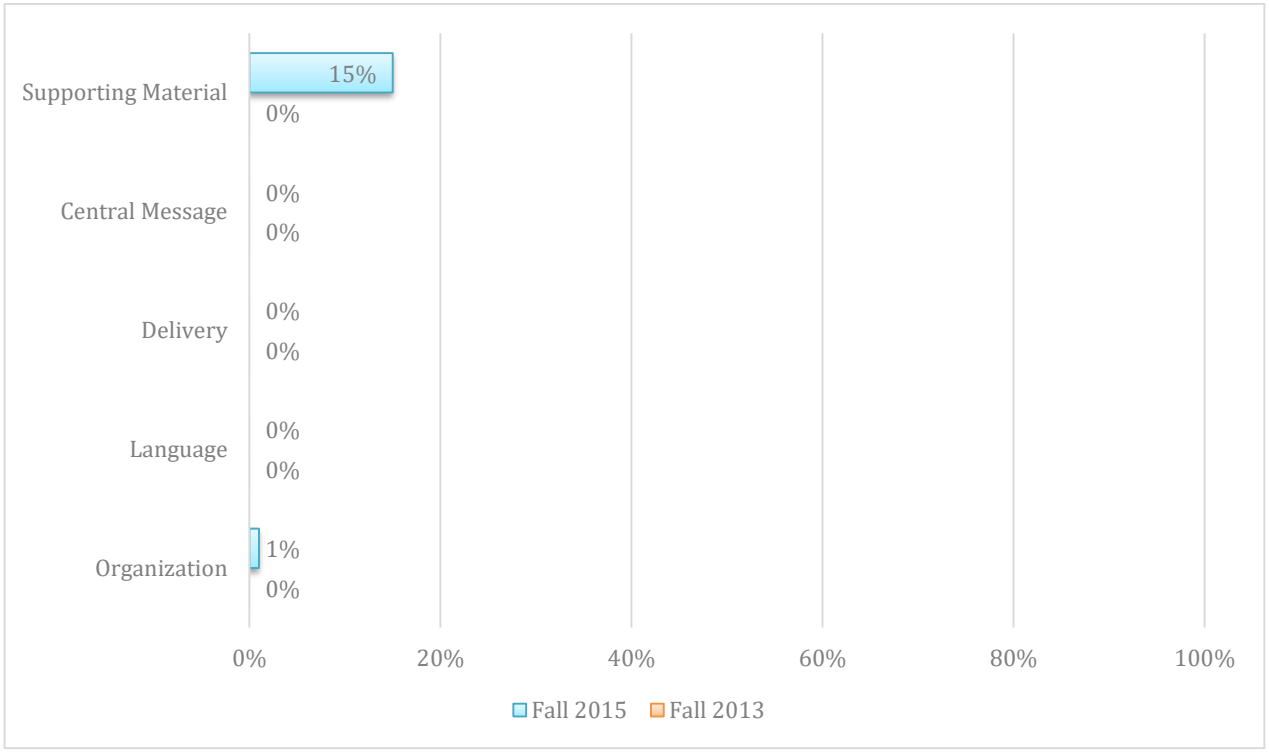


Figure 11. Comparison of percentage of SWPs assigned NA scores for Scientific Reasoning as a function of dimension and cycle through fall 2015

Students demonstrated greatest strength on the Language and Central Message dimensions with overall scores of 2.28 and 2.25 respectively. Students' lowest overall score was 1.75 on the Supporting Materials dimension (Table 16). Career/technical students received higher scores than transfer students in all dimensions except Delivery.

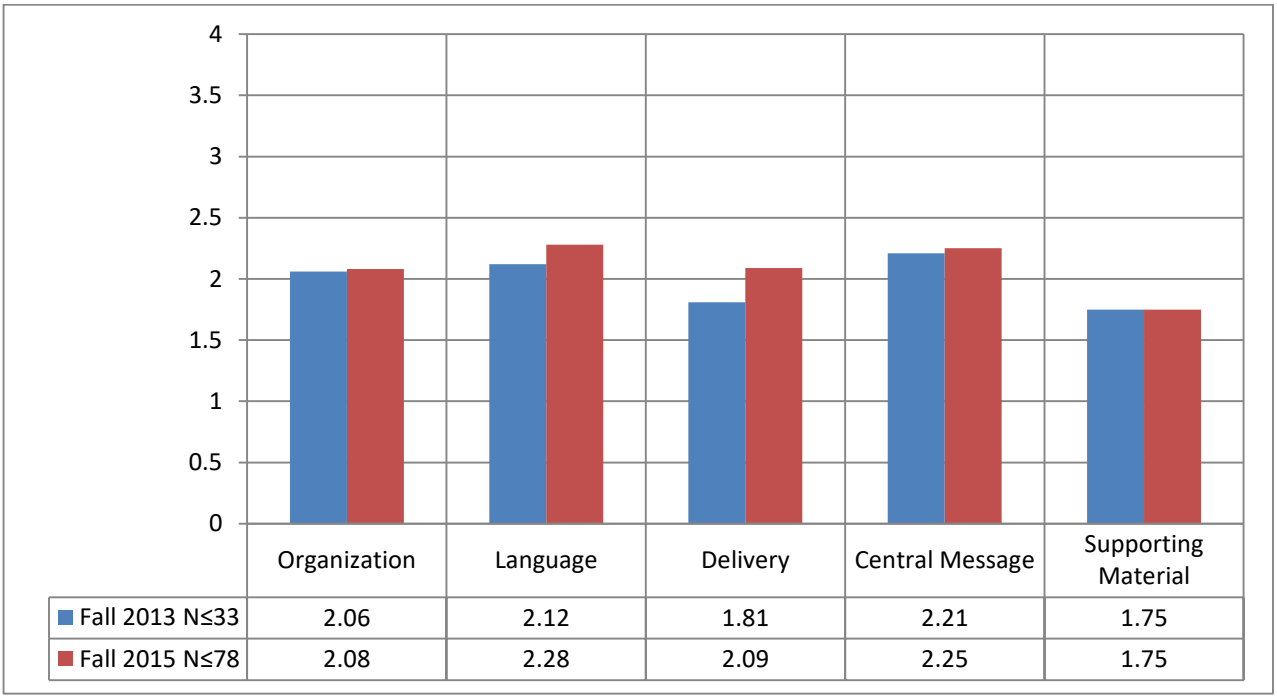
Table 16 illustrates student performance in the Oral Communication learning outcome.

Table 16

Oral Communication as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) fall 2015

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Organization	2.08 (.56) N=77	2.29 (.62) N=14	2.03 (.54) N=63
Language	2.28 (.48) N=78	2.41 (.44) N=15	2.24 (.49) N=63
Delivery	2.09 (.62) N=78	2.07 (.74) N=15	2.09 (.60) N=63
Central Message	2.25 (.62) N=78	2.55 (.69) N=15	2.18 (.59) N=63
Supporting Material	1.75 (.63) N=66	1.90 (.66) N=14	1.71 (.63) N=52

The fall 2015 overall scores increased for all dimensions except Supporting Materials for which scores were the same as fall 2013 (Figure 12).



	Organization	Language	Delivery	Central Message	Supporting Material
Fall 2013 N≤33	2.06	2.12	1.81	2.21	1.75
Fall 2015 N≤78	2.08	2.28	2.09	2.25	1.75

Figure 12. Comparison of Oral Communication overall score as a function of dimension and cycle through fall 2015

7. Student Learning in Cultural and Social Understanding Fall 2015

Ninety-eight (98) SWPs were submitted for the assessment of Cultural and Social Understanding. Of the 98 SWPs assessed, 85 required evaluation by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications. The number of SWPs which required a third scorer decreased from 95% in fall 2013 to 87% in fall 2015.

There were no dimensions for which all SWPs were scored. Eighty-two (82) SWPs were scored for Knowledge – Institutions. The Skills – Arts and Skills – Language dimensions received the most NA scores with 60 and 59 SWPs that did not require the demonstration of the dimension respectively. These findings represent an overall decrease in the percentage of NA scores for all dimensions as compared to findings from fall 2013. The Skills – Language dimension showed the biggest reduction in percentage of NA scores with a reduction of 24% (Figure 13).

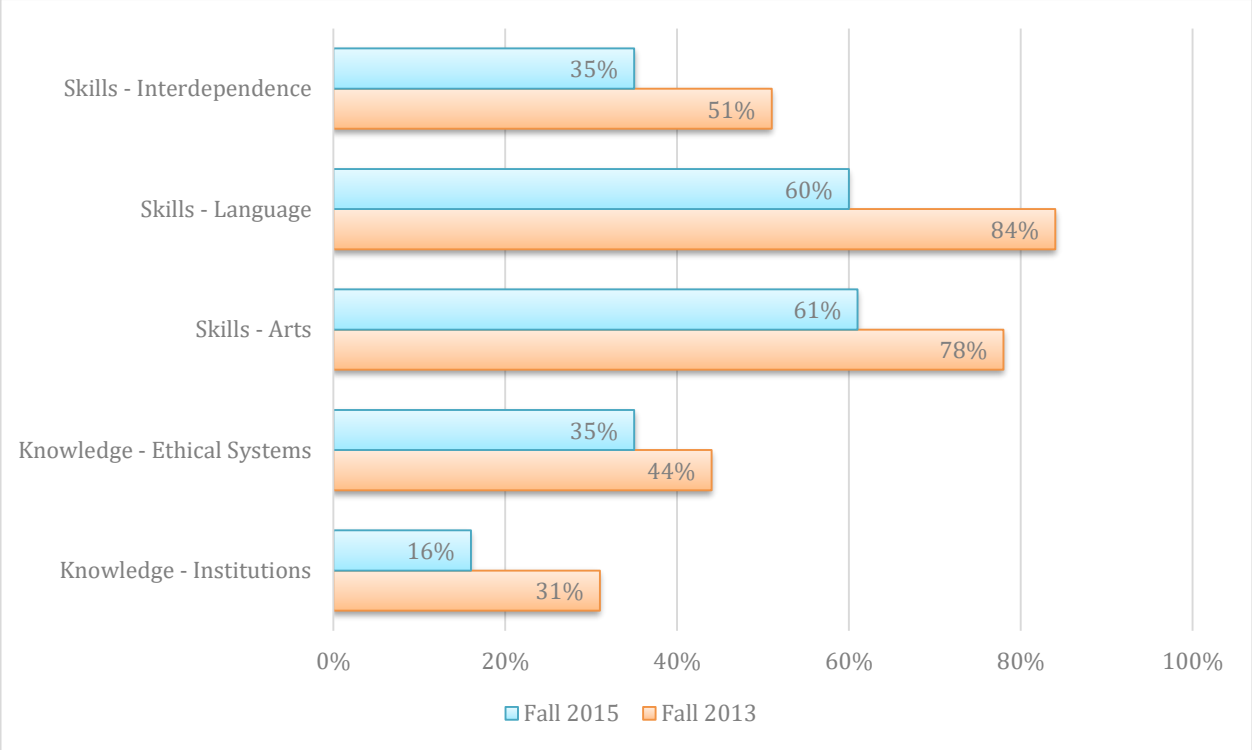


Figure 13. Comparison of percentage of SWPs assigned NA scores for Cultural and Social Understanding as a function of dimension and cycle through fall 2015

Students demonstrated greatest strength on the Knowledge - Ethical Systems and Knowledge - Institutions dimensions with overall scores of 1.84 and 1.71 respectively. Students' lowest overall scores were 1.56 and 1.57 on the Skills - Arts and Skills - Recognize the interdependence of distinctive world-wide social, economic, geo-political, and cultural systems (Skills – Interdependence) dimensions. The difference between scores for transfer and career/technical students' scores was greatest for the Skill - Language dimension with career/technical students' score .14 above transfer students' score (Table 17).

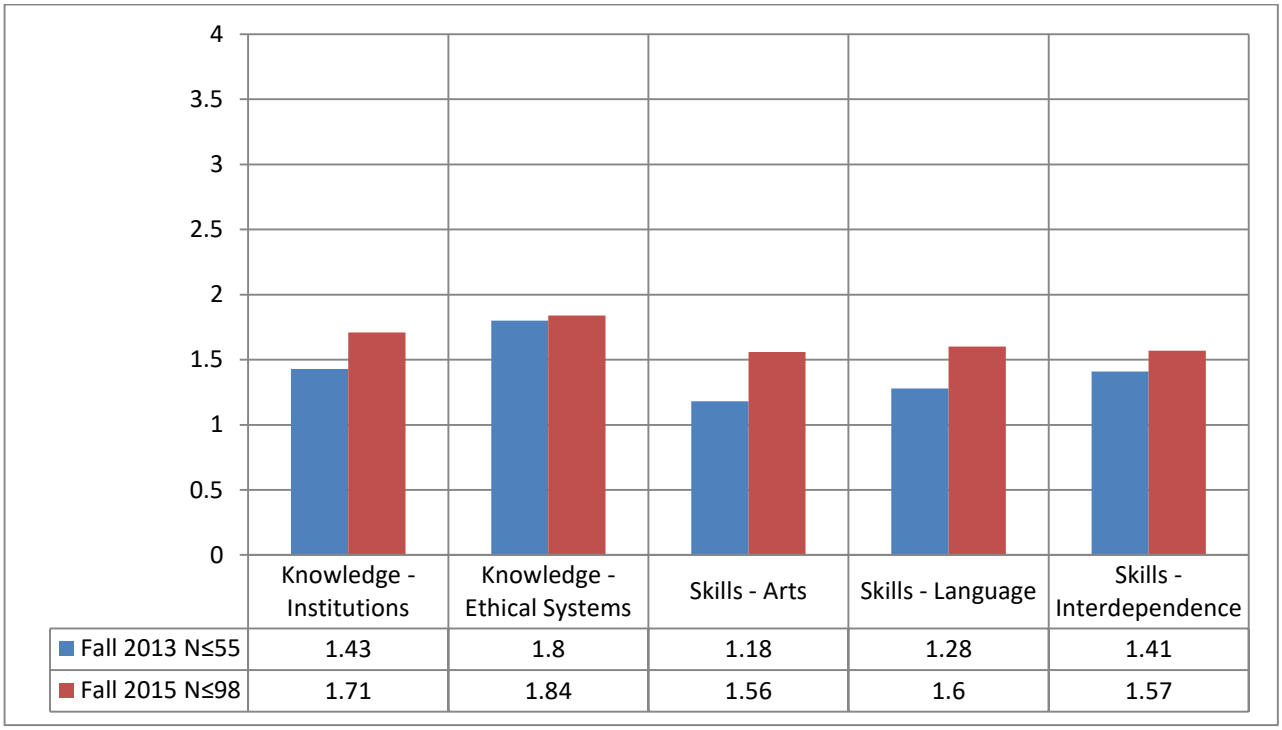
Table 17 illustrates student performance in the Cultural and Social Understanding learning outcome.

Table 17

Cultural and Social Understanding as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2015

Dimension	Overall	Curriculum type Career/technical	Transfer
Knowledge - Institutions	1.71 (.58) N=82	1.77 (.55) N=36	1.66 (.61) N=46
Knowledge - Ethical Systems	1.84 (.58) N=64	1.80 (.62) N=30	1.87 (.54) N=34
Skills - Arts	1.56 (.61) N=38	1.60 (.67) N=21	1.52 (.54) N=17
Skills - Language	1.60 (.65) N=39	1.52 (.58) N=16	1.66 (.70) N=23
Skills - Interdependence	1.57 (.61) N=64	1.57 (.58) N=29	1.58 (.64) N=35

The fall 2015 overall scores increased for all dimensions as compared to fall 2013 (Figure 14). While the Skills - Arts dimension received the lowest overall scores of all dimensions in both rotations, this dimension showed the biggest increase from fall 2013 to fall 2015 going up .38.



	Knowledge - Institutions	Knowledge - Ethical Systems	Skills - Arts	Skills - Language	Skills - Interdependence
Fall 2013 N≤55	1.43	1.8	1.18	1.28	1.41
Fall 2015 N≤98	1.71	1.84	1.56	1.6	1.57

Figure 14. Comparison of Cultural and Social Understanding overall score as a function of dimension and cycle through fall 2015

8. Student Learning in Personal Development Spring 2016

Ninety-four (94) SWPs were submitted for the assessment of Personal Development in spring 2016. Of the SWPs assessed, 79 required evaluation by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications. The number of SWPs which required a third scorer dropped from 86% in spring 2014 to 84% in spring 2016.

The dimension with the least number of NA scores was Social and Interpersonal Development with 13 SWPs that did not require the demonstration of the dimension. The Academic and Professional Goal Setting dimension received the most NA scores with 31 SWPs that did not require the demonstration of the dimension. The percentage of NA scores for Personal Identity and Social and Interpersonal Development dimensions decreased from spring 2014 to Fall 2016 with the Social and Interpersonal Development dimension showing the most change with a 27% decrease (Figure 15). However, the Academic and Professional Goal Setting, Decision Making, and Personal Wellness dimensions showed increases in the percentages of NA scores from spring 2014 to spring 2016.

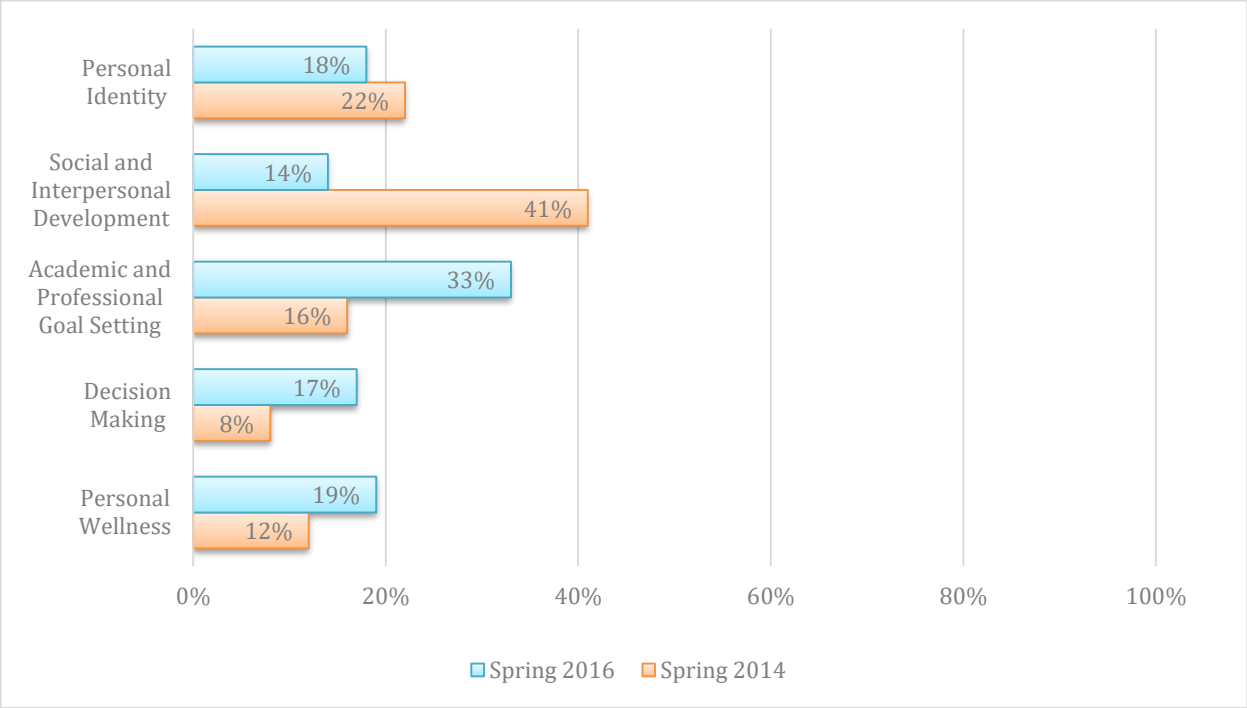


Figure 15. Comparison of percentage of SWPs assigned NA scores for Personal Development as a function of dimension and cycle through spring 2016

Students demonstrated greatest strength on the Decision Making dimension with an overall score of 1.90. Both transfer and career/technical students scored highest on this dimension with scores of 1.89 and 1.92 respectively. Students' lowest overall score was 1.61 on the Academic and Professional Goal Setting dimension (Table 18). The difference between scores for transfer and career/technical students' scores was greatest for the Academic and Professional Goal Setting dimension in which transfer students' score was 1.71, .2 above career/technical students' score. However, average score across all dimensions was the same for transfer students and career/technical students at 1.74.

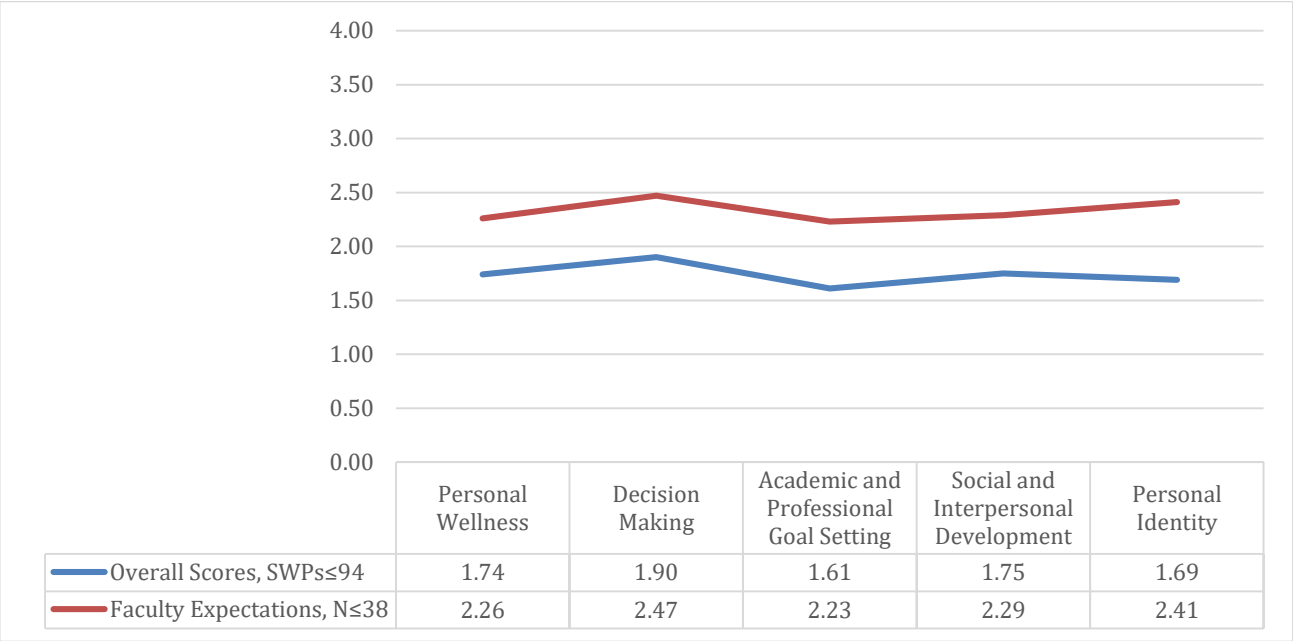
Table 18 illustrates student performance in the Cultural and Social Understanding learning outcome.

Table 18

Personal Development as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2016

Dimension	Overall	Curriculum type Career/technical	Transfer
Personal Wellness	1.74 (.77) N=76	1.80 (.89) N=37	1.69 (.65) N=39
Decision Making	1.90 (.72) N=78	1.89 (.76) N=38	1.92 (.68) N=40
Academic and Professional Goal Setting	1.61 (.79) N=63	1.71 (.90) N=32	1.51 (.65) N=31
Social and Interpersonal Development	1.75 (.75) N=81	1.65 (.74) N=38	1.83 (.75) N=43
Personal Identity	1.69 (.73) N=77	1.65 (.75) N=38	1.73 (.71) N=39

Spring 2016 overall scores were lower than faculty expectations as indicated on the AAT form on all dimensions (Figure 16). The greatest difference between overall scores and faculty expectations was on Personal Identity dimension with scores .72 points lower than faculty expectations.



	Personal Wellness	Decision Making	Academic and Professional Goal Setting	Social and Interpersonal Development	Personal Identity
Overall Scores, SWPs≤94	1.74	1.90	1.61	1.75	1.69
Faculty Expectations, N≤38	2.26	2.47	2.23	2.29	2.41

Figure 16. Comparison of overall scores and faculty expectations for Personal Development as a function of dimension spring 2016

The spring 2016 overall scores increased for all dimensions except Academic and Professional Goal Setting and Personal Wellness dimensions as compared to spring 2014 (Figure 17).

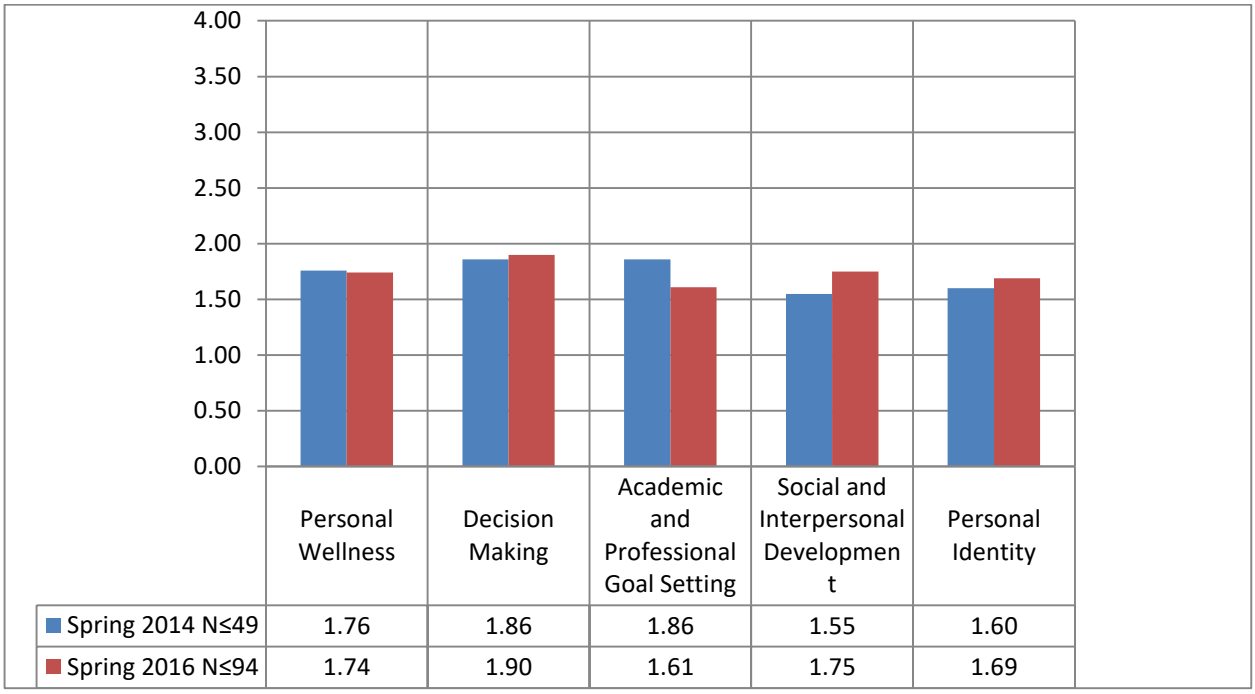


Figure 17. Comparison of Personal Development overall score as a function of dimension and cycle through spring 2016

F. Student Learning Findings from Third Assessment of Competencies

1. Student Learning in Critical Thinking Fall 2016

One hundred ninety-three (193) SWPs, 68% of the sample, were collected for the assessment of student learning in Critical Thinking in fall 2016. The most frequent reason SWPs were not collected was "Faculty did not submit" at 36% of the SWPs not collected followed by "Student did not submit" at 35% (Figure 18). The "Other" inaccessible reason category included reasons such as "technical difficulties", "submission lost in mail", and "SWPs submitted by faculty after the GEA deadline."

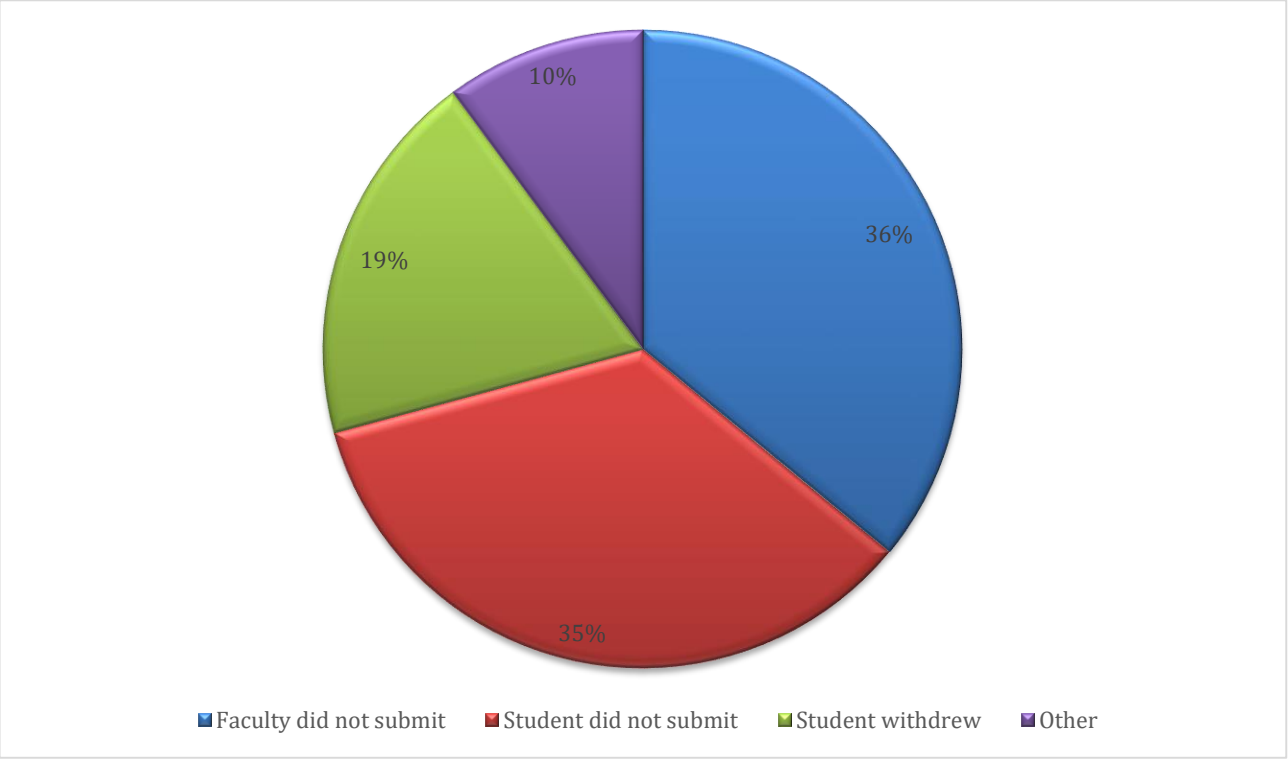


Figure 18. Percentages of inaccessible reason codes for Critical Thinking fall 2016

Of the 193 SWPs, 148 required the review of a third assessor because the scoring between the initial two reviewers differed significantly per the scoring specifications.

Of the 193 SWPs collected for Critical Thinking, 185 were scored for the Explanation of Issues, 183 for Student's Position, and 181

for Conclusions and Related Outcomes dimensions. One hundred seventy-six (176) were scored for the Influence of Context dimension. The percentage of NA scores for fall 2016 were lower than spring 2014 for all dimensions except Conclusions and Related Outcomes which was 6% for both cycles. While the Solving Problems dimension continued to receive the most NA scores, the percentage of NA scores for this dimension decreased from 34% in spring 2014 to 24% in fall 2016 (Figure 19).

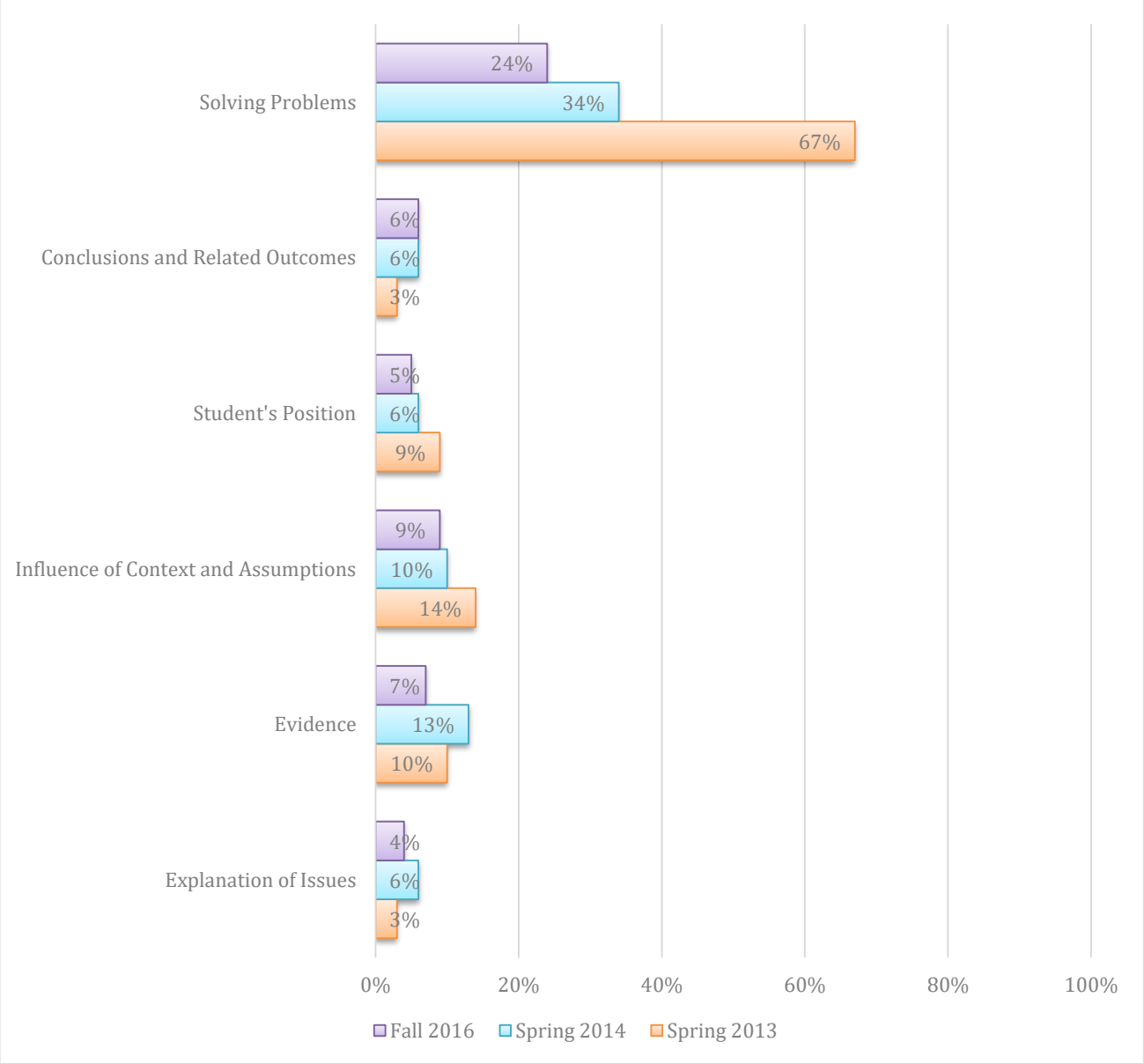


Figure 19. Comparison of percentage of SWPs assigned NA scores for Critical Thinking as a function of dimension and cycle through fall 2016

Students achieved the highest scores on the Explanation of Issues, Conclusions and Related Outcomes, and Evidence dimensions with overall scores of 2.03, 1.80, and 1.79 respectively (Table 19). Transfer students scored higher than career/technical students on all dimensions except the Evidence and Student's Position dimensions. Students received the lowest scores on the Solving Problems dimension with an overall score of 1.65, transfer student score of 1.66, and career/technical student score of 1.63. The most variation between scores for career/technical and transfer students was on the Conclusions and Related Outcomes dimension with transfer students scoring .11 higher than career/technical students.

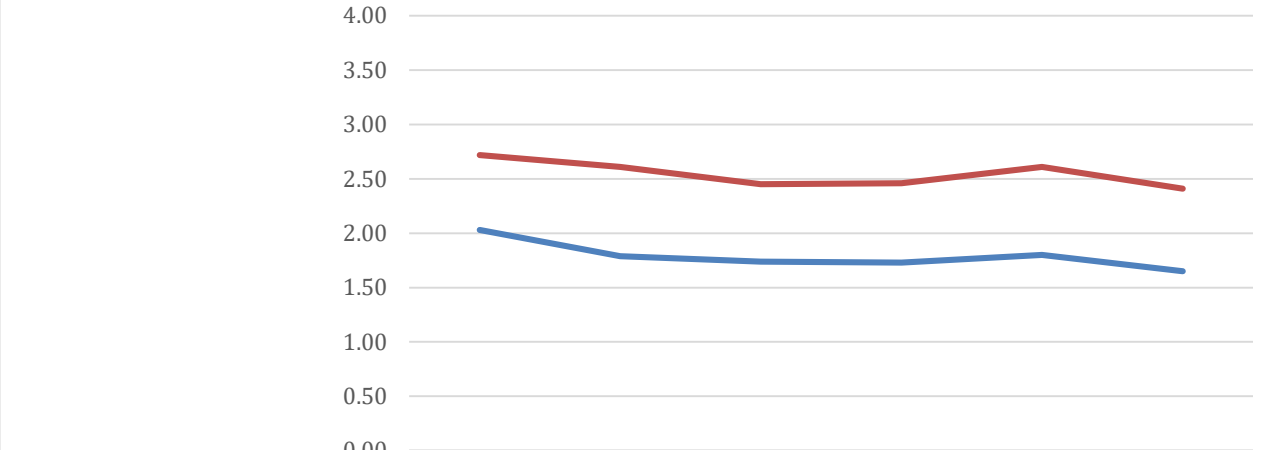
Table 19 illustrates student performance in the Critical Thinking learning outcome.

Table 19

Critical Thinking Average Score as Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2016

		Curriculum type	
Dimension	Overall	Career/technical	Transfer
Explanation of Issues	2.03 (.76) N=185	1.98 (.75) N=79	2.06 (.77) N=106
Evidence	1.79 (.72) N=179	1.79 (.71) N=78	1.78 (.74) N=101
Influence of Context and Assumptions	1.74 (.80) N=176	1.72 (.78) N=77	1.75 (.83) N=99
Student's Position	1.73 (.77) N=183	1.76 (.77) N=78	1.71 (.77) N=105
Conclusions and Related Outcomes	1.80 (.76) N=181	1.73 (.73) N=77	1.84 (.79) N=104
Solving Problems	1.65 (.86) N=146	1.63 (.83) N=62	1.66 (.89) N=84

Fall 2016 overall scores were lower than faculty expectations as indicated on the AAT form on all dimensions (Figure 20). The greatest difference between overall scores and faculty expectations was on the Evidence and Conclusions and Related Outcomes dimensions with scores .82 and .81 points lower respectively than faculty expectations.



	Explanation of Issues	Evidence	Influence of Context and Assumptions	Student's Position	Conclusions and Related Outcomes	Solving Problems
Overall Scores, SWPs≤193	2.03	1.79	1.74	1.73	1.80	1.65
Faculty Expectations, N≤133	2.72	2.61	2.45	2.46	2.61	2.41

Figure 20. Comparison of overall scores and faculty expectations for Critical Thinking as a function of dimension fall 2016

Overall scores by dimension for the fall 2016 assessment of Critical Thinking were higher than scores for the spring 2013 and 2014 cycles (Figure 21). Scores were highest on the Explanation of Issues dimension for all cycles, and lowest on the Influence of Context and Assumptions and Student's Position dimensions.

	Explanation of Issues	Evidence	Influence of Context and Assumptions	Student's Position	Conclusions and Related Outcomes	Solving Problems
Spring 2013 N≤58	1.98	1.67	1.27	1.41	1.56	1.43
Spring 2014 N≤100	1.81	1.64	1.39	1.38	1.52	1.43
Fall 2016 N≤193	2.03	1.79	1.74	1.73	1.8	1.65

Figure 21. Comparison of Critical Thinking overall score as a function of dimension and cycle through fall 2016

2. Student Learning in Scientific Reasoning Spring 2017

One hundred eighty-five (185) SWPs, 66% of the sample, were collected for the assessment of student learning in Scientific Reasoning in spring 2017. The most frequent reason SWPs were not collected was "Student did not submit" at 38% of the SWPs not collected followed by "Faculty did not submit" at 25% (Figure 22). The "Other" inaccessible reason category included reasons such as "Faculty left college/Replacement not identified at time of faculty notifications", "Competency incorrectly identified on Course Outline", and "Faculty returned SWP to student; no copy retained for GEA."

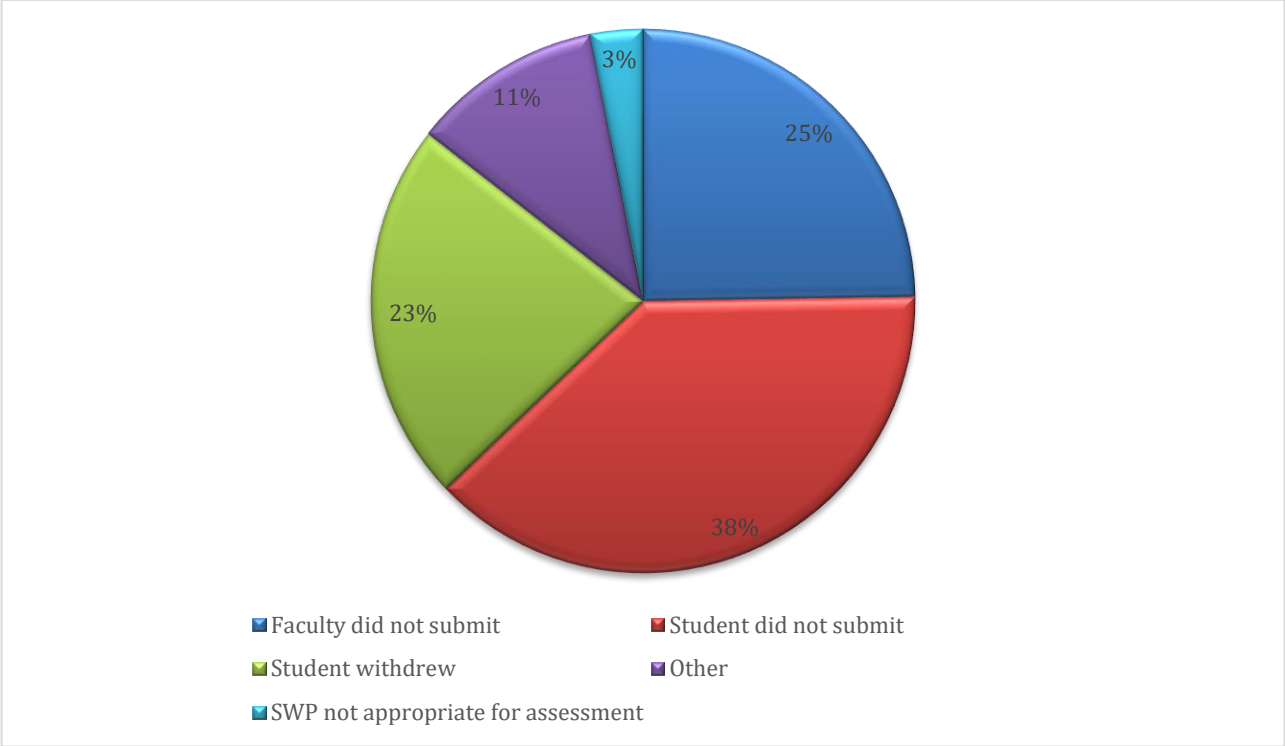


Figure 22. Percentages of inaccessible reason codes for Scientific Reasoning spring 2017

Of the 185 SWPs assessed for Scientific Reasoning, 129 (70%) required evaluation by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

One hundred and seventy-eight (178) SWPs were scored for the Analysis dimension, and 175 were scored for the Conclusions, Limitations, and Implications dimensions. The percentage of NA scores was lower for all dimensions in Spring 2017 than in previous cycles. The Existing Knowledge, Research and/or Views dimension received the most NA scores with 31 SWPS that did not require the demonstration of the dimension. However, the percentage of NA scores for the Existing Knowledge, Research and/or Views dimension decreased from 41% in spring 2013 to 34% in spring 2015 to 17% in spring 2017 (Figure 23).

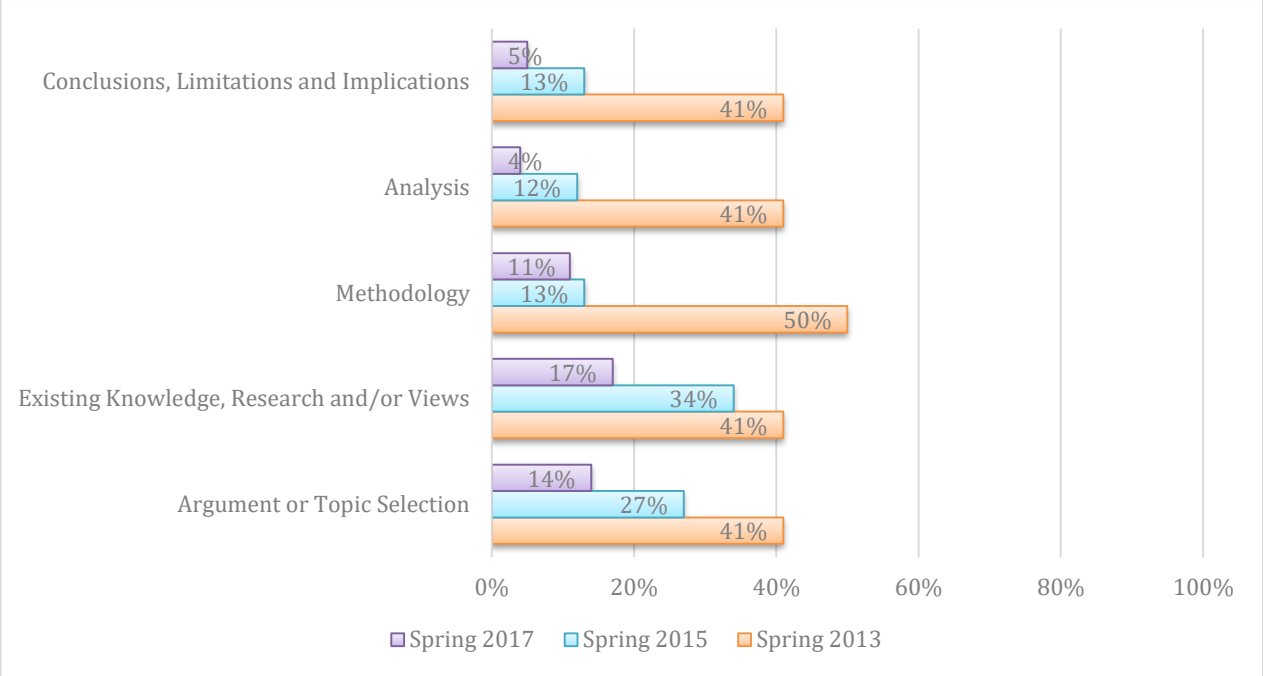


Figure 23. Comparison of percentage of SWPs assigned NA scores for Scientific Reasoning as a function of dimension and cycle through spring 2017

Students demonstrated greatest strength on the Argument/Topic Selection and Methodology dimensions with overall scores of 2.23 and 2.21 respectively. Students' lowest overall scores were on the Existing Knowledge/Research and/or Views and Conclusions, Limitations, and Implications dimensions (Table 20). Career/technical students received lower scores than transfer students in all dimensions.

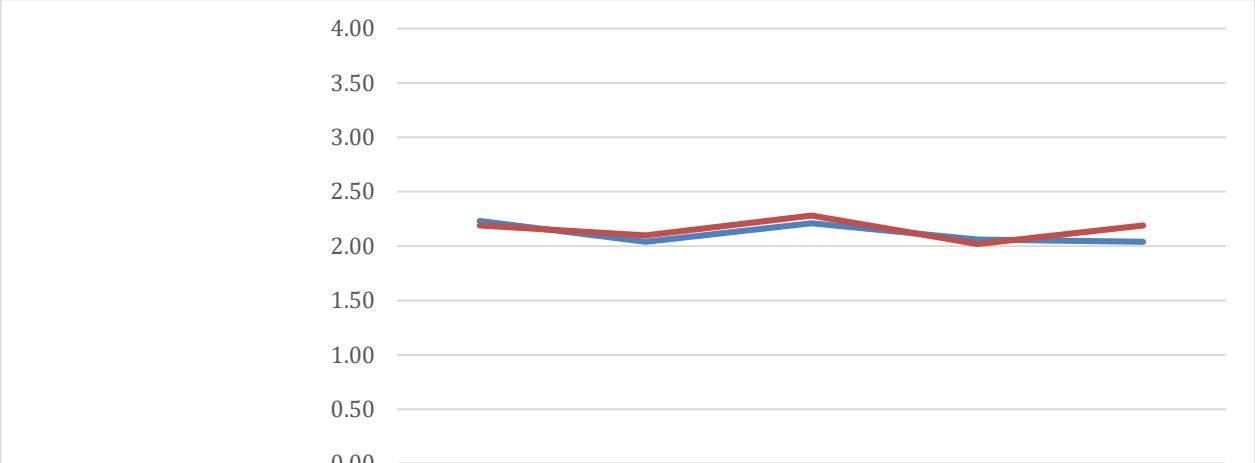
Table 20 illustrates student performance in the Scientific Reasoning learning outcome.

Table 20

Scientific Reasoning as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Spring 2017

	Curriculum type		
Dimension	Overall	Career/technical	Transfer
Argument or Topic Selection	2.23 (.72) *N*=159	2.11 (.85) *N*=29	2.25 (.69) *N*=130
Existing Knowledge, Research and/or Views	2.04 (.66) *N*=154	2.02 (.53) *N*=25	2.04 (.69) *N*=129
Methodology	2.21 (.74) *N*=165	1.93 (.74) *N*=30	2.27 (.73) *N*=135
Analysis	2.06 (.66) *N*=178	1.85 (.63) *N*=33	2.11 (.66) *N*=145
Conclusions, Limitations and Implications	2.04 (.70) *N*=175	1.95 (.68) *N*=31	2.06 (.70) *N*=144

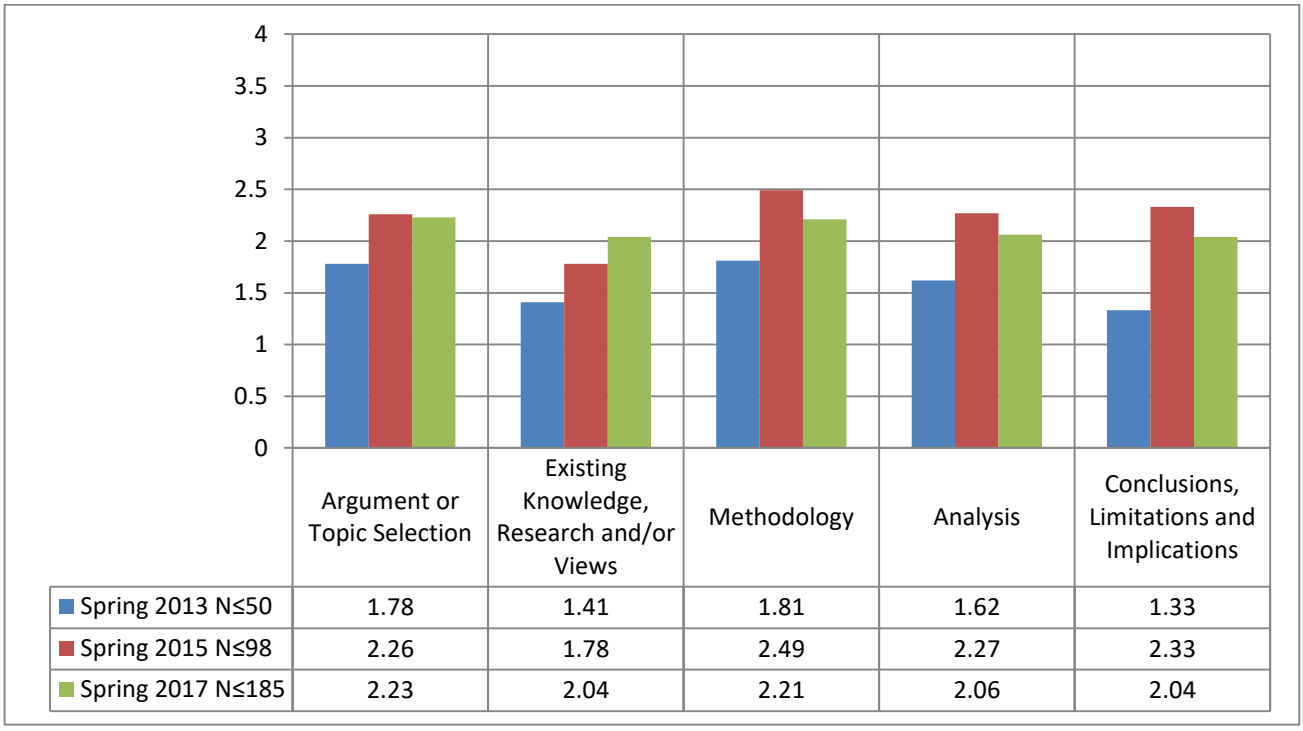
Spring 2017 overall scores were lower than faculty expectations as indicated on the AAT form on the Existing Knowledge, Methodology, and Conclusion/Limitations dimensions. The greatest difference between overall scores and faculty expectations was on the Conclusions/Limitations dimension with scores .15 points lower than faculty expectations (Figure 24).



	Argument or Topic Selection	Existing Knowledge, Research and/or Views	Methodology	Analysis	Conclusions, Limitations and Implications
Overall Scores, SWPs≤185	2.23	2.04	2.21	2.06	2.04
Faculty Expectations, N≤65	2.19	2.10	2.28	2.02	2.19

Figure 24. Comparison of overall scores and faculty expectations for Scientific Reasoning as a function of dimension spring 2017

Spring 2017 overall scores were lower than spring 2015 for all dimensions except Existing Knowledge, Research and/or Views which increased by .26 (Figure 25). The greatest differences in overall scores between spring 2017 and spring 2015 were on the Conclusions, Limitations and Implications and Methodology dimensions which decreased by .29 and .28 respectively. Spring 2017 overall scores were higher than spring 2013 for all dimensions.



	Argument or Topic Selection	Existing Knowledge, Research and/or Views	Methodology	Analysis	Conclusions, Limitations and Implications
Spring 2013 N≤50	1.78	1.41	1.81	1.62	1.33
Spring 2015 N≤98	2.26	1.78	2.49	2.27	2.33
Spring 2017 N≤185	2.23	2.04	2.21	2.06	2.04

Figure 25. Comparison of Scientific Reasoning overall score as a function of dimension and cycle through spring 2017

3. Student Learning in Written Communication in Fall 2017

Two hundred and fourteen (214) SWPs, 76% of the sample, were collected for the assessment of student learning in Written Communication. The most frequent reason SWPs were not collected was "Student withdrew" at 44% of the SWPs not collected followed by "Student did not submit" at 35% (Figure 26). The "Other" inaccessible reason category included reasons such as "SWP submitted by faculty after deadline" and "SWP submitted by student after deadline."

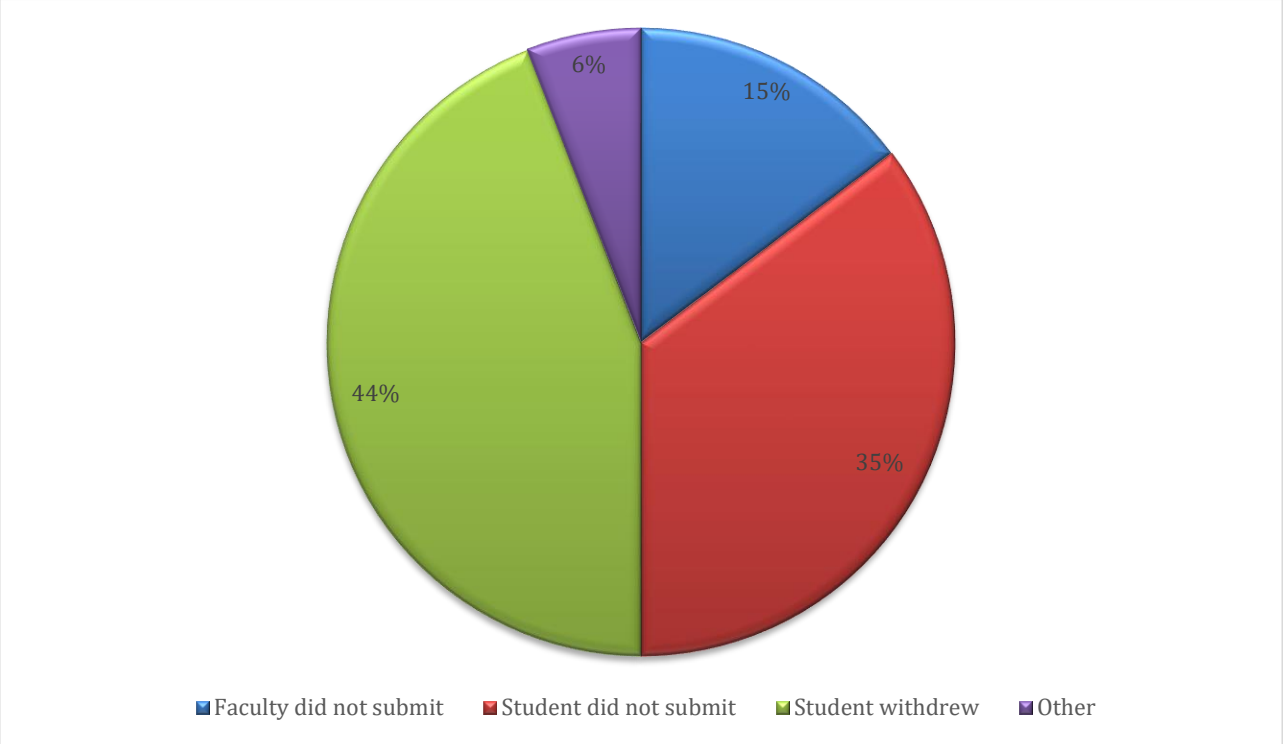


Figure 26. Percentages of inaccessible reason codes for Written Communication fall 2017

Of the 214 SWPs assessed, 133 required review by a third assessor per scoring specifications.

All 214 SWPs collected for Written Communication were scored for the Context and Purpose for Writing, Content Development, and Genre and Disciplinary Conventions dimensions. Only one SWP received an NA score for the Control of Syntax and Mechanics dimension. While the Sources and Evidence dimension continued to receive the most NA scores, the percentage of NA scores for this dimension decreased from 44% in fall 2012 to 24% in fall 2014 to 14% in fall 2017 (Figure 27).

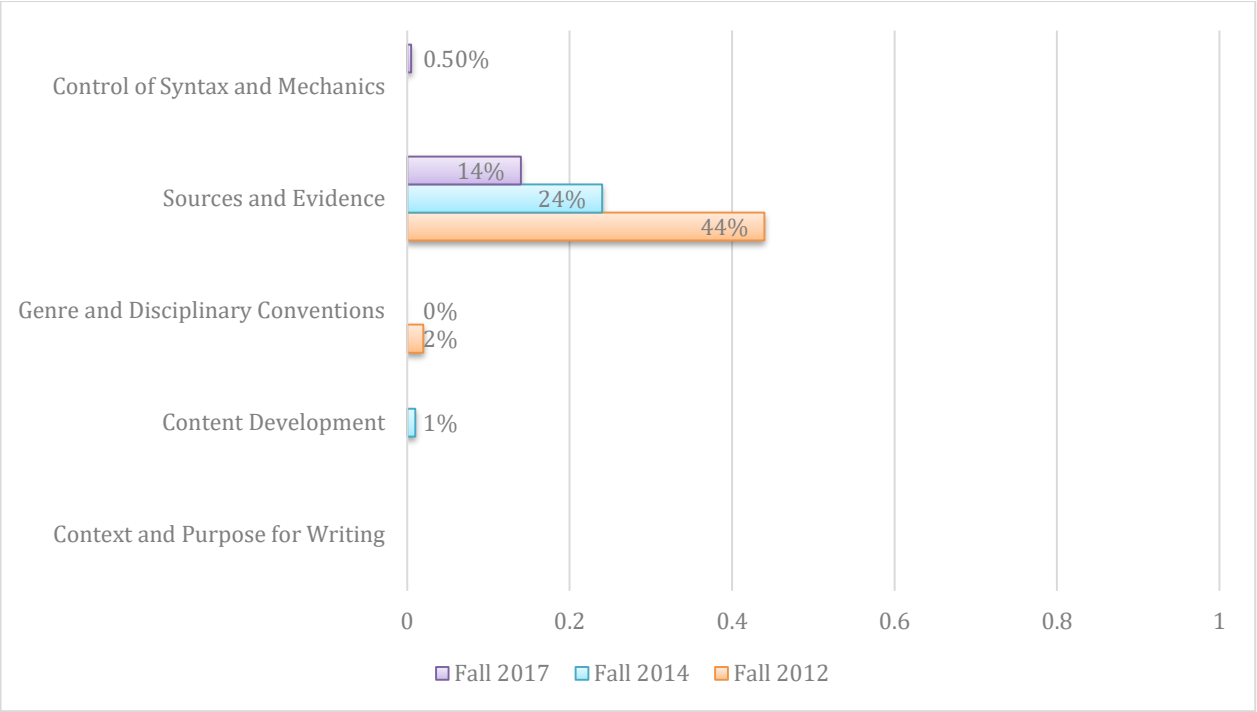


Figure 27. Comparison of percentage of SWPs assigned NA scores for Written Communication as a function of dimension and cycle through fall 2017

Students' greatest strength in Written Communication was on the Control of Syntax and Mechanics dimension with an overall score of 2.20. Students' weakest dimensions were Sources and Evidence and Genre and Disciplinary Conventions with overall scores of 1.88 and 1.99 respectively (Table 21). Career/technical students achieved higher scores than transfer students on all dimensions. The most variation between scores for career/technical and transfer students was on Genre and Disciplinary Conventions dimension with career/technical students scoring .49 higher than transfer students.

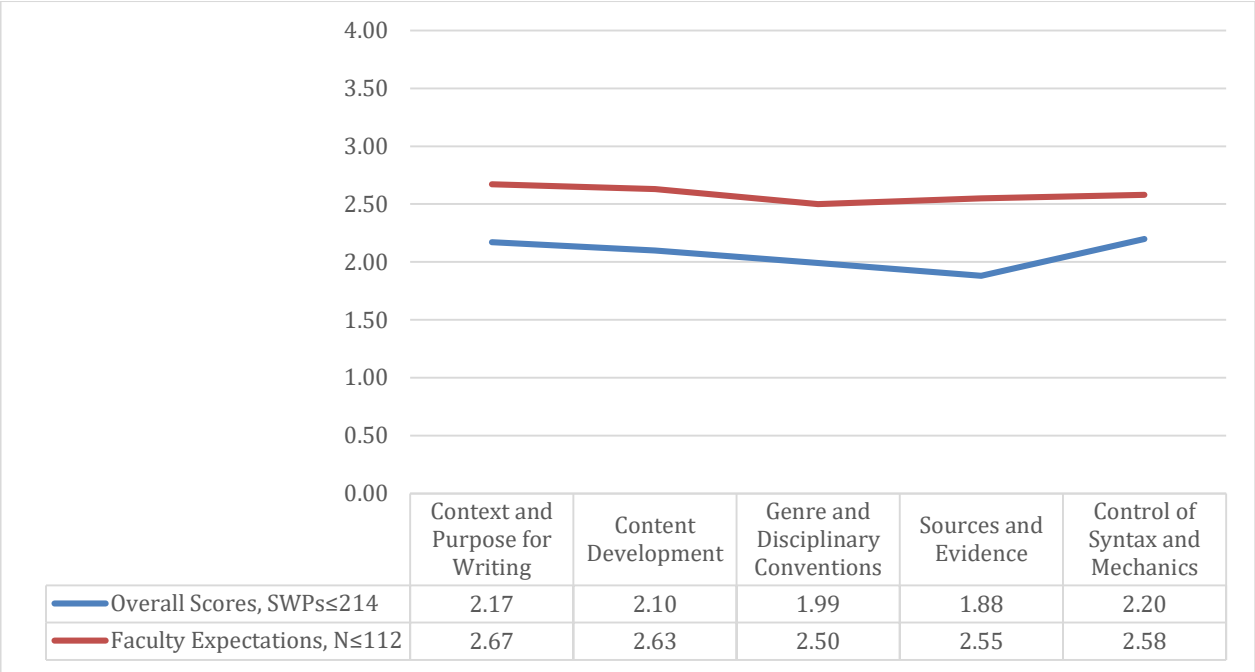
Table 21 illustrates student performance on the Written Communication learning outcome.

Table 21

Written Communication Average Score as a Function of Dimension and Curriculum Type (with Standard Deviations in Parentheses) Fall 2017

Curriculum type Dimension	Overall	Career/technical	Transfer
Context of and Purpose Writing	2.17 (.69) *N*=214	2.32 (.62) *N*=42	2.14 (.71) for *N*=172
Content Development	2.10 (.73) *N*=214	2.23 (.67) *N*=42	2.07 (.75) *N*=172
Genre & Disciplinary Conventions	1.99 (.68) *N*=214	2.18 (.63) *N*=42	1.94 (.68) *N*=172
Sources and Evidence	1.88 (.85) *N*=184	1.95 (.91) *N*=37	1.86 (.83) *N*=147
Control of Syntax and Mechanics	2.20 (.61) *N*=213	2.33 (.58) *N*=42	2.17 (.62) *N*=171

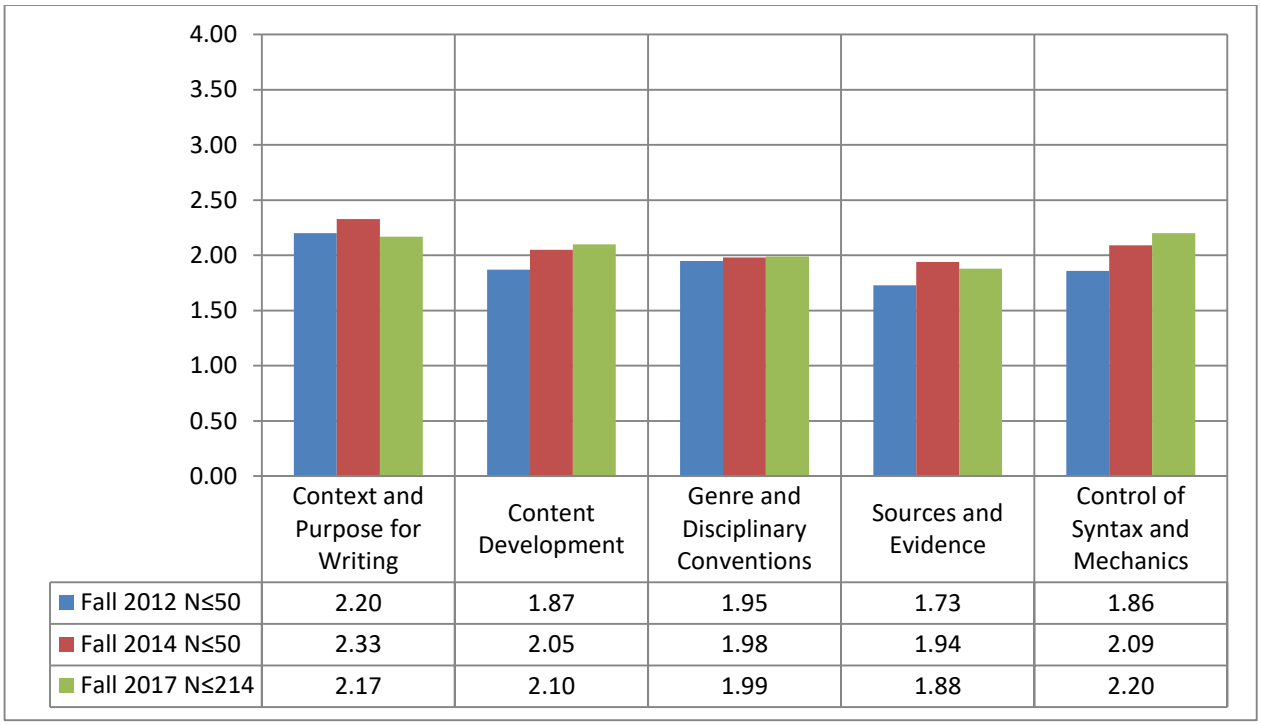
Fall 2017 overall scores were lower than faculty expectations as indicated on the AAT form on all dimensions. The greatest difference between overall scores and faculty expectations was on the Sources and Evidence dimension with scores .67 points lower than faculty expectations (Figure 28).



	Context and Purpose for Writing	Content Development	Genre and Disciplinary Conventions	Sources and Evidence	Control of Syntax and Mechanics
Overall Scores, SWPs≤214	2.17	2.10	1.99	1.88	2.20
Faculty Expectations, N≤112	2.67	2.63	2.50	2.55	2.58

Figure 28. Comparison of overall scores and faculty expectations for Written Communication as a function of dimension fall 2017

Written Communication overall scores were higher in fall 2017 than in fall 2014 in Content Development, Control of Syntax and Mechanics, and Genre and Disciplinary Conventions (Figure 29). Overall scores remain lowest on the Sources and Evidence dimension for all cycles.



	Context and Purpose for Writing	Content Development	Genre and Disciplinary Conventions	Sources and Evidence	Control of Syntax and Mechanics
Fall 2012 N≤50	2.20	1.87	1.95	1.73	1.86
Fall 2014 N≤50	2.33	2.05	1.98	1.94	2.09
Fall 2017 N≤214	2.17	2.10	1.99	1.88	2.20

Figure 29. Comparison of Written Communication overall score as a function of dimension and cycle through fall 2017

H. Student Learning Comprehensive Results

Comparison of percentage of SWPs collected from the sample by competency and rotation showed a yield of 55% to 80% of the sample across all competencies and rotations (Figure 30). The average yield for the second rotation across all competencies was higher at 71% than for the first rotation at 67%.

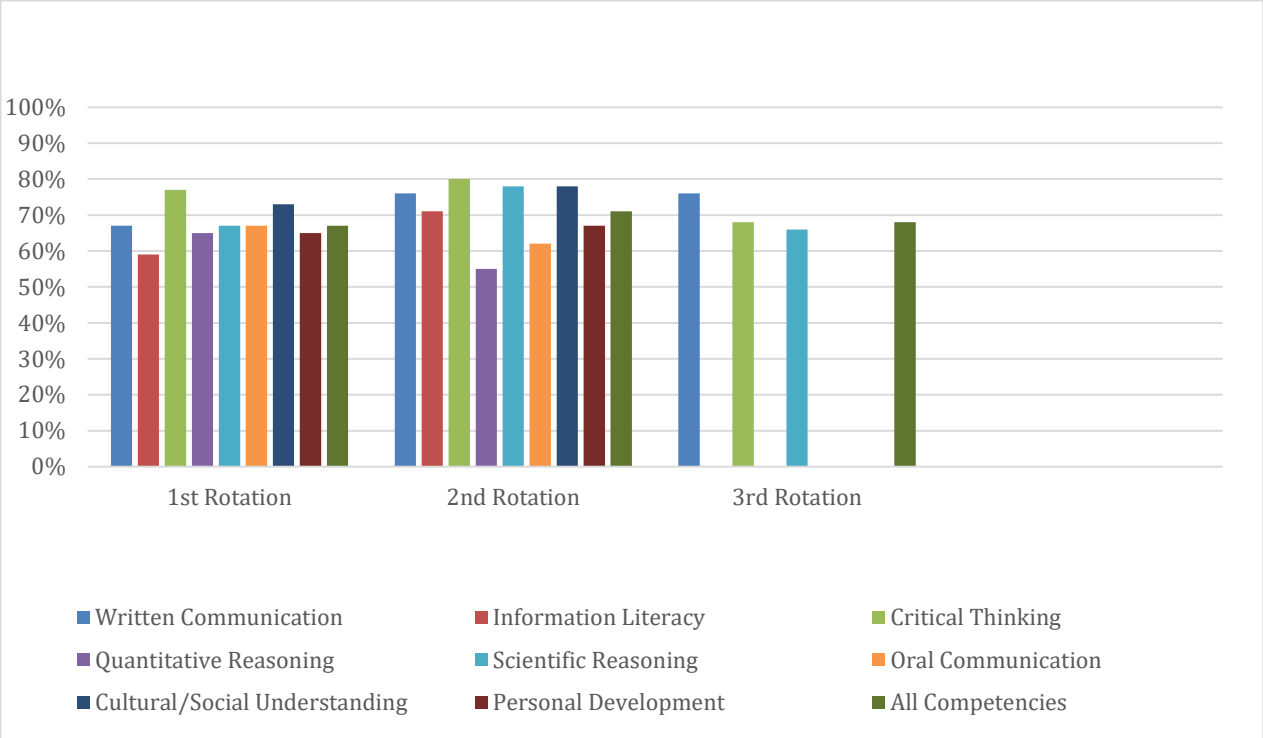


Figure 30. Comparison of percentage of SWPs collected from sample by competency and rotation through fall 2017

Comparison of percentage of SWPs which required review by a third assessor for each competency by rotation shows little variation within each competency except for Written Communication and Oral Communication which increased form the first to the second assessment by 25% and 17% respectively (Figure 31). However, the higher percentages of SWPs assessed by a third assessor of 55% for Written Communication and 56% for Oral Communication in the second rotation were lower than the percentages for all other competencies. The percentage of SWPs evaluated by a third assessor for Scientific Reasoning remained the same for the first two rotations at 66%, and increased in the third rotation to 70%, which remained the next lowest percentages after those for Written and Oral Communication. The percentage of SWPs evaluated by a third assessor for Critical Thinking was the same for the second and third assessment cycles at 77%. The highest percentages of SWPs evaluated by a third assessor were in Cultural and Social Understanding at 95% for the first assessment and 87% for the second.

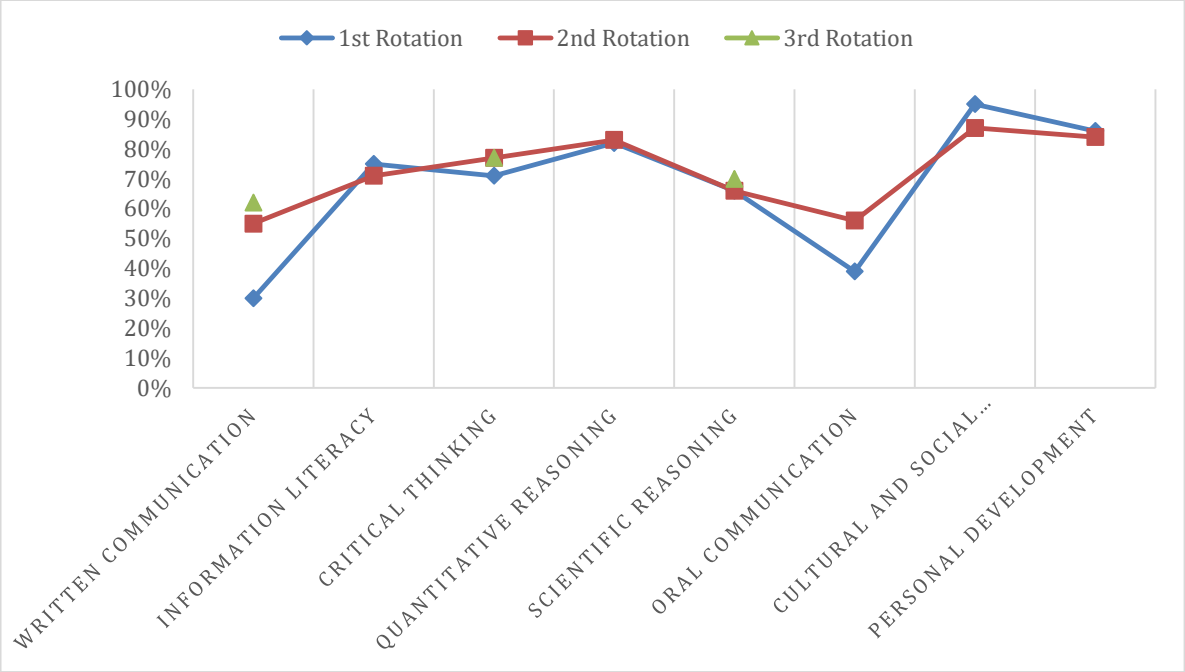


Figure 31. Comparison of percentage of SWPs evaluated by a third assessor as a function of competency and rotation through fall 2017

Comparison of findings for each competency by rotation shows improvement in overall scores for all dimensions of Written Communication, Quantitative Reasoning, Scientific Reasoning, and Cultural and Social Understanding the second time the competency was assessed (Table 21). Overall scores for all dimensions of Critical Thinking were highest in the third assessment. While overall scores decreased from the second to the third rotations of Scientific Reasoning in all but one dimension, in the third rotation, all dimensions achieved over the Capstone level of 2 for the first time for any competency. Overall scores for Oral Communication improved in the second rotation in all dimensions except one for which the same score was achieved in both the first and second rotations. Similarly, overall scores increased for three of the five dimensions of Personal Development in the second rotation. Conversely, overall scores for all dimensions of Information Literacy were lower the second time this competency was assessed.

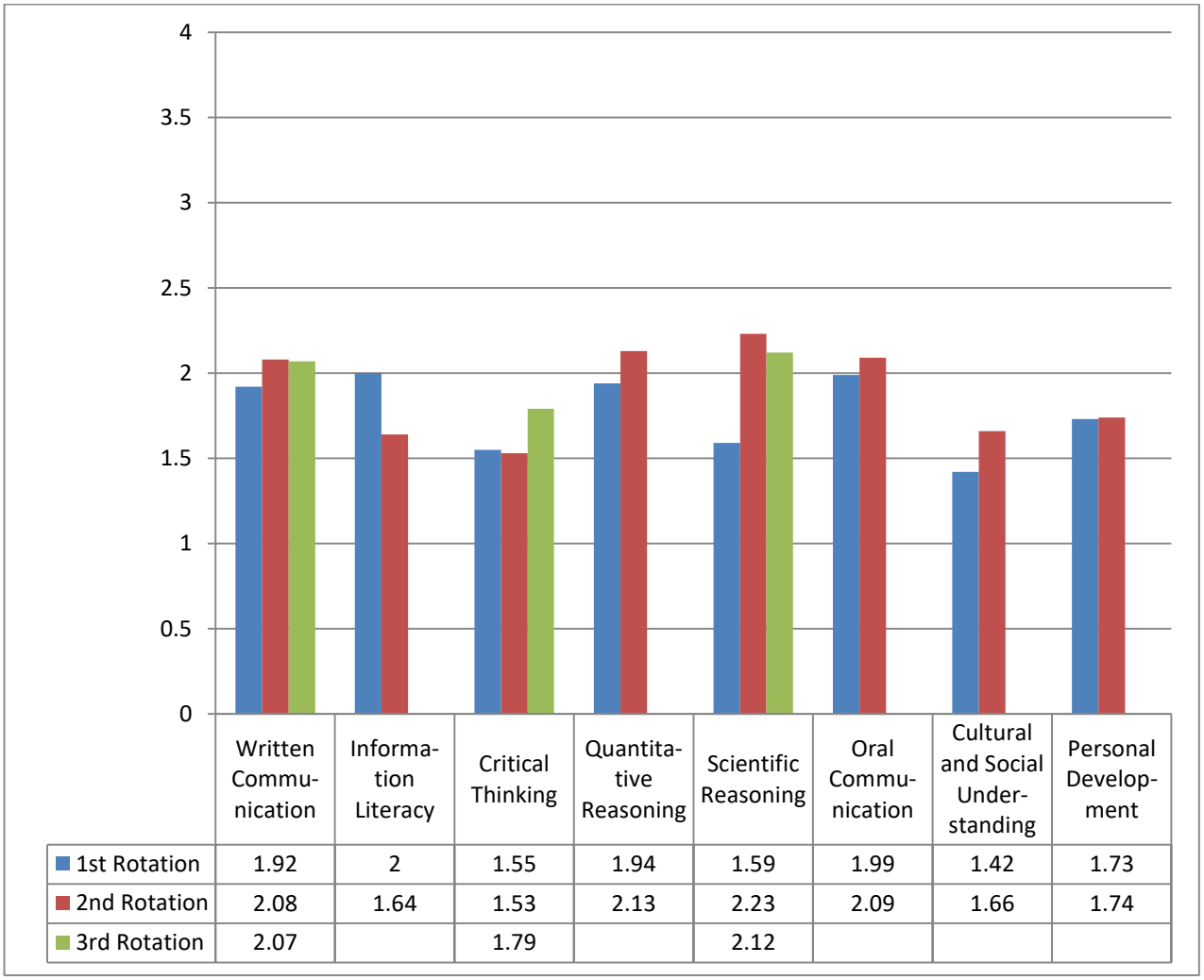
Table 22 illustrates student performance across all competencies and rotations.

Table 22

Overall Score as a Function of Competency and Rotation

Competency (cycles assessed)	Dimension	1st Rotation	2nd Rotation	3rd Rotation
Written Communication (fall 2012, 2014, and 2017)	Context & Purpose	2.20	2.33	2.17
	Content Development	1.87	2.05	2.10
	Genre & Conventions	1.95	1.98	1.99
	Sources & Evidence	1.73	1.94	1.88
	Syntax & Mechanics	1.86	2.09	2.20
Information Literacy (fall 2012 and 2014)	Nature & Extent of Info	2.48	2.01	
	Access of Needed Info	1.98	1.88	
	Eval of Info & Sources	1.67	1.52	
	Use Info Effectively	2.09	1.59	
	Use Info Ethically/Legally	1.78	1.21	
Critical Thinking (spring 2013 and 2014 and fall 2016)	Explanation of Issues	1.98	1.81	2.03
	Evidence	1.67	1.64	1.79
	Influence of Context…	1.27	1.39	1.74
	Student's Position	1.41	1.38	1.73
	Conclusions & Outcomes	1.56	1.52	1.80
	Solving Problems	1.43	1.43	1.65
Quantitative Reasoning (spring 2013 and 2015)	Interpretation	1.77	2.11	
	Representation	2.02	2.20	
	Calculation	2.33	2.39	
	Application/Analysis	1.82	1.98	
	Assumptions	1.59	1.69	
	Communication	2.13	2.40	
Scientific Reasoning (spring 2013, 2015, and 2017)	Topic Selection	1.78	2.26	2.23
	Existing Knowledge…	1.41	1.78	2.04
	Methodology	1.81	2.49	2.21
	Analysis	1.62	2.27	2.06
	Conclusions/Limitations…	1.33	2.33	2.04
Oral Communication (fall 2013 and 2015)	Organization	2.06	2.08	
	Language	2.12	2.28	
	Delivery	1.81	2.09	
	Central Message	2.21	2.25	
	Supporting Material	1.75	1.75	
Cultural/Social Understanding (fall 2013 and 2015)	Knowledge - Institutions	1.43	1.71	
	Knowledge - Ethical Systems	1.80	1.84	
	Skills - Arts	1.18	1.56	
	Skills - Language	1.28	1.60	
	Skills - Interdependence	1.41	1.57	
Personal Development (spring 2014 and 2016)	Personal Wellness	1.76	1.74	
	Decision-making	1.86	1.90	
	Academic/Prof Goals	1.86	1.61	
	Social Development	1.55	1.75	
	Personal Identity	1.60	1.69	

Average scores across all dimensions for each competency and rotation increased the most from the first rotation to the second for Scientific Reasoning from 1.59 in spring 2013 to 2.33 in spring 2015 (Figure 32). Average scores across all dimensions decreased the most from the first rotation to the second for Information Literacy from 2 in fall 2012 to 1.64 in fall 2014. Average dimension scores showed the least change for Written Communication from the second to third rotation and for Personal Development from the first to second rotation.



	Written Communication	Information Literacy	Critical Thinking	Quantitative Reasoning	Scientific Reasoning	Oral Communication	Cultural and Social Understanding	Personal Development
1st Rotation	1.92	2	1.55	1.94	1.59	1.99	1.42	1.73
2nd Rotation	2.08	1.64	1.53	2.13	2.23	2.09	1.66	1.74
3rd Rotation	2.07		1.79		2.12			

Figure 32. Comparison of average scores across all dimensions as a function of competency and rotation through fall 2017

A comparison of average competency scores across all dimensions and rotations indicates that students' greatest strengths were in Quantitative Reasoning and Oral Communication followed by Written Communication and Scientific Reasoning (Figure 33). Critical Thinking and Cultural and Social Understanding were the competencies in need of most improvement.

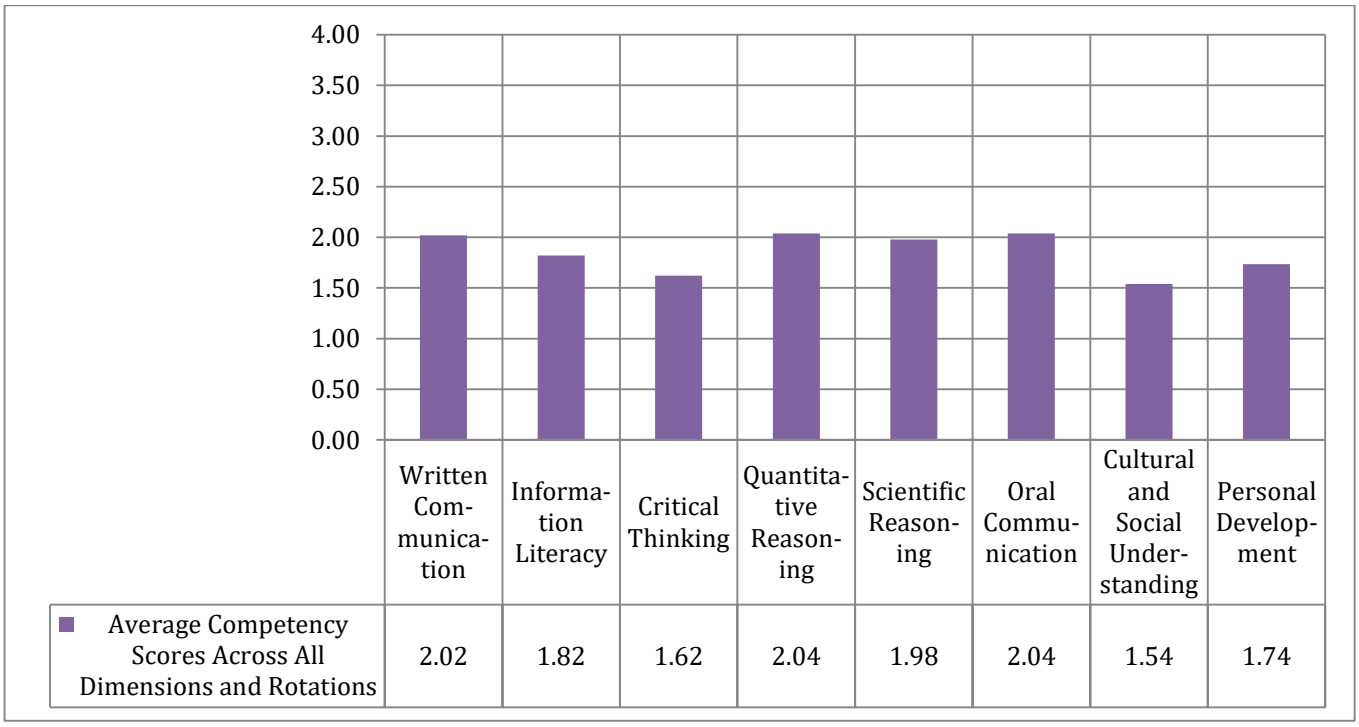


Figure 33. Average competency scores across all dimensions and rotations through fall 2017

IV. Assignment Design

The GEA Plan evolves from lessons learned and data gathered, analyzed, and used to enhance and improve teaching and learning. Beginning in fall 2015, as directed by Policy 2105 – Academic Standards for Course Outlines, Syllabi, and General Education Assessment, the Assignment Design component of the GEA Plan was added to the assessment.

A. Assignment Design Rotation

The Assignment Design component follows the same rotation of competencies as the Student Learning component. Beginning spring 2016, one competency was assessed per cycle. A full rotation through all competencies will be completed in a four-year period (Table 23). The slower rotation will allow more time for analysis and discussion of data to inform and implement change to support student learning.

Table 23 illustrates the Assignment Design competency rotation from the first assessment of each competency.

Table 23

Assignment Design Competency Rotation – Phase One

Competency	15-16	16-17	17-18	18-19	19-20	20-21	21-22
Written Communication			FALL				FALL
Oral Communication	FALL			FALL			
Critical Thinking		FALL				FALL	
Cultural/Social Understanding	FALL				FALL		
Information Literacy				SPRING			
Quantitative Reasoning			SPRING				SPRING
Scientific Reasoning		SPRING				SPRING	
Personal Development					SPRING		

B. Assignment Design Sampling

Beginning fall 2015, OIE identified a separate sample for the Assignment Design component of the GEA through a stratified random sample process from courses not included in the College Catalog as meeting the general education core requirements for degrees or certificates. These selected courses (Appendix D) included non-general education courses that identified the targeted competency as one developed in the course, have student enrollees from both degree types (career/technical and transfer) who are representative of TCC's degree-seeking population, and are offered in a variety of course formats (traditional, hybrid, online). Ten courses per competency are included in each assessment cycle.

C. Assignment Design Methods

Academic Services notifies all faculty of the competency(ies) under assessment and faculty responsibilities for the upcoming cycle. Once the tuition deadline date passes for classes to adjust for student attrition, OIE submits a list of courses selected for the Assignment Design track. Academic Services notifies faculty. Faculty from selected courses submit completed AAT forms and assignment instructions. As faculty submit assignments, Academic Services removes all course and faculty identifiers before uploading to the GEA Tool. Assessors access assignments and enter scores electronically at a group scoring session and/or remotely at their convenience. Scores by dimension include "Supports Dimension" for assignments which require students to demonstrate the dimension and "Does Not Support Dimension" for assignments which do not require students to demonstrate the dimension. A third assessor scores the assignment when the first two scores are different for any dimension of the rubric. Final scores are the scores agreed upon by two assessors.

OIE analyzes scores for each competency to arrive percentages for "Supports Dimension" and "Does Not Support Dimension" (Appendix F).

D. Assignment Design Findings from First Assessment of Competencies

1. Assignment Design for Oral Communication Fall 2015

Eight assignments were submitted for the assessment of Assignment Design for Oral Communication in fall 2015. Of the eight assignments assessed, six required evaluations by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

All assignments assessed supported the Organization dimension. Eighty-seven percent (87%) of the assignments supported the Language, Delivery, and Central Message dimensions. Seventy-five percent (75%) supported the Supporting Material dimension (Figure 34).

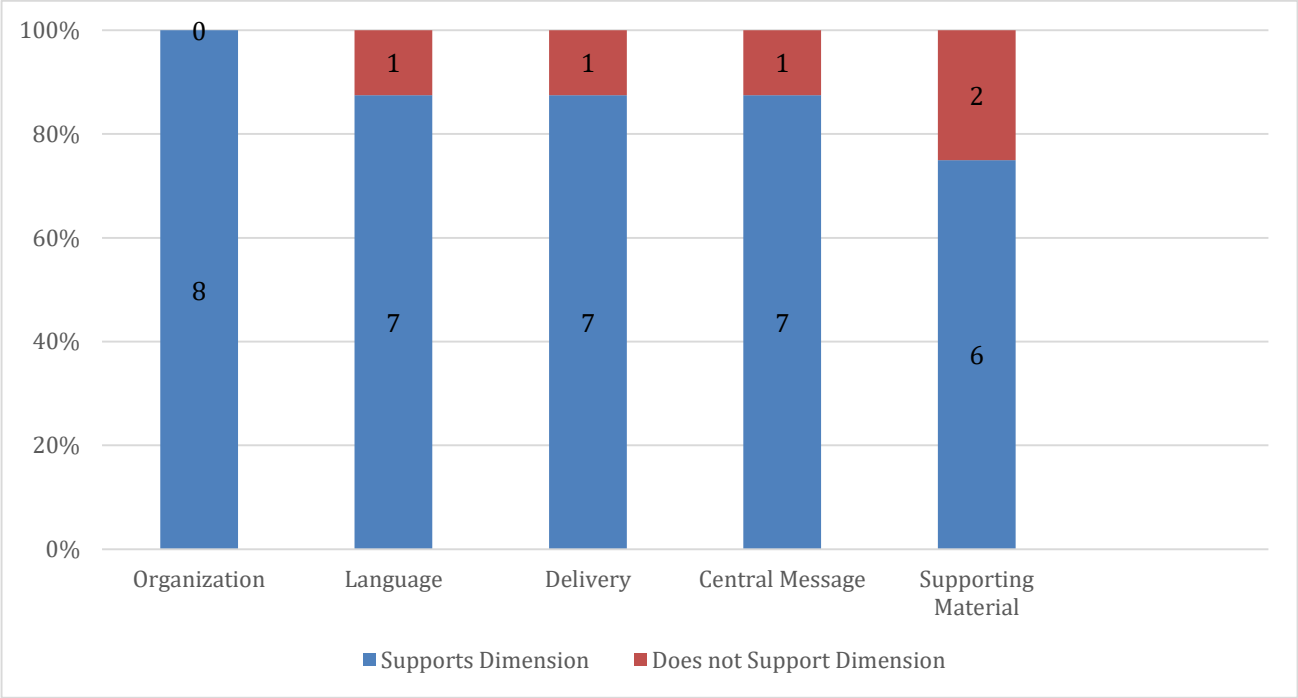


Figure 34. Assignment Design support of Oral Communication learning outcome dimensions fall 2015

2. Assignment Design for Cultural and Social Understanding Fall 2015

Eight assignments were submitted for the assessment of Assignment Design for Cultural and Social Understanding in fall 2015. Of the eight assignments assessed, seven required evaluations by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

The Knowledge – Institutions, Knowledge – Ethical Systems, and Skills – Language dimensions were the most supported dimensions with 75% of the assignments requiring the demonstration of these dimensions (Figure35). Skills – Interdependence was the least supported dimension with only 50% of the assignments requiring demonstration of this dimension.

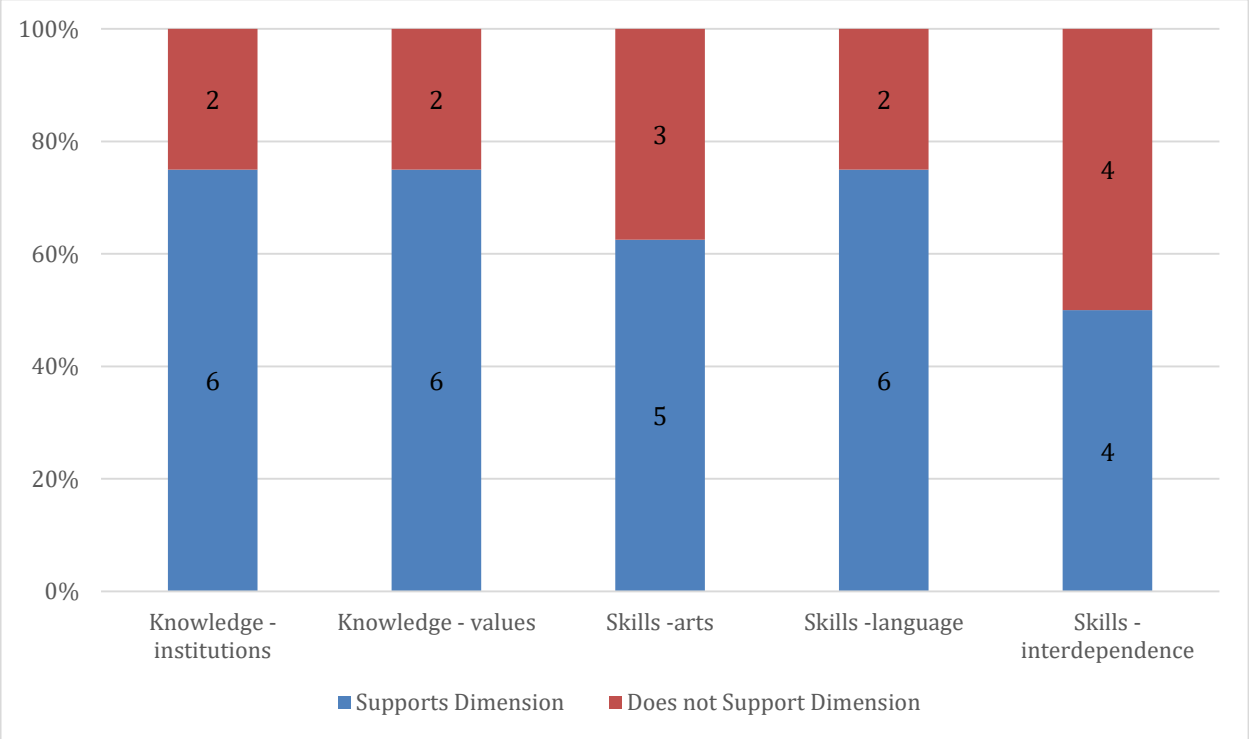


Figure 35. Assignment Design support of Cultural and Social Understanding learning outcome dimensions fall 2015

3. Assignment Design for Personal Development Spring 2016

Ten assignments were submitted for the assessment of Assignment Design for Personal Development in spring 16. Of the ten assignments assessed, eight required evaluations by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

The Decision Making and Personal Identity dimensions were the most supported dimensions with 70% of the assignments requiring demonstration of these dimensions (Figure 36). Sixty percent (60%) of the assignments supported the Personal Wellness and Academic and Professional Goal Setting. The least supported dimension was Social and Interpersonal Development dimensions with support from 50% of the assignments.

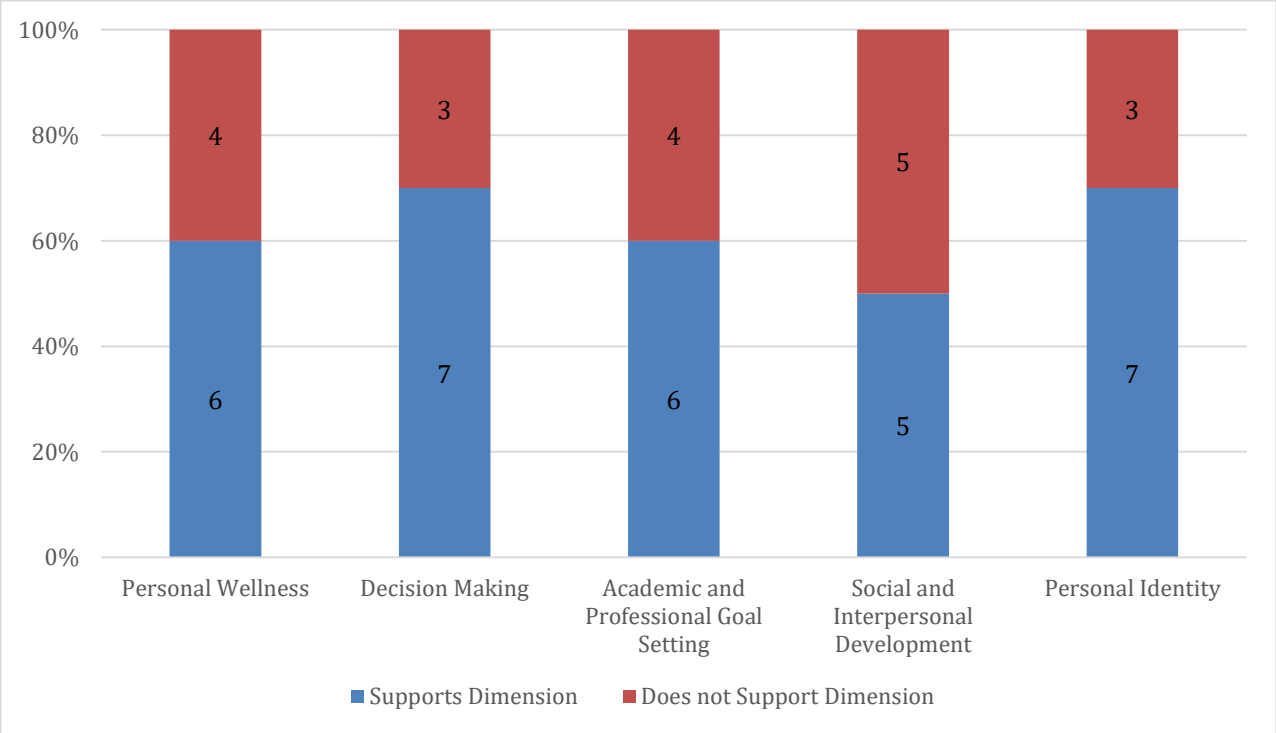


Figure 36. Assignment Design support of Personal Development learning outcome dimensions spring 2016

4. Assignment Design for Critical Thinking Fall 2016

Eight assignments were submitted for the assessment of Assignment Design for Critical Thinking in fall 2016. Of the eight assignments assessed, six required evaluations by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

The Explanation of Issues, Conclusions and Related Outcomes, and Solving Problems dimensions were the most supported dimensions with 88% of the assignments requiring demonstration of these dimensions (Figure 37). Seventy-five percent (75%) of the assignments supported the Student's Position dimension. The least supported dimensions were the Evidence and Influence of Context dimensions with support from 63% of the assignments.

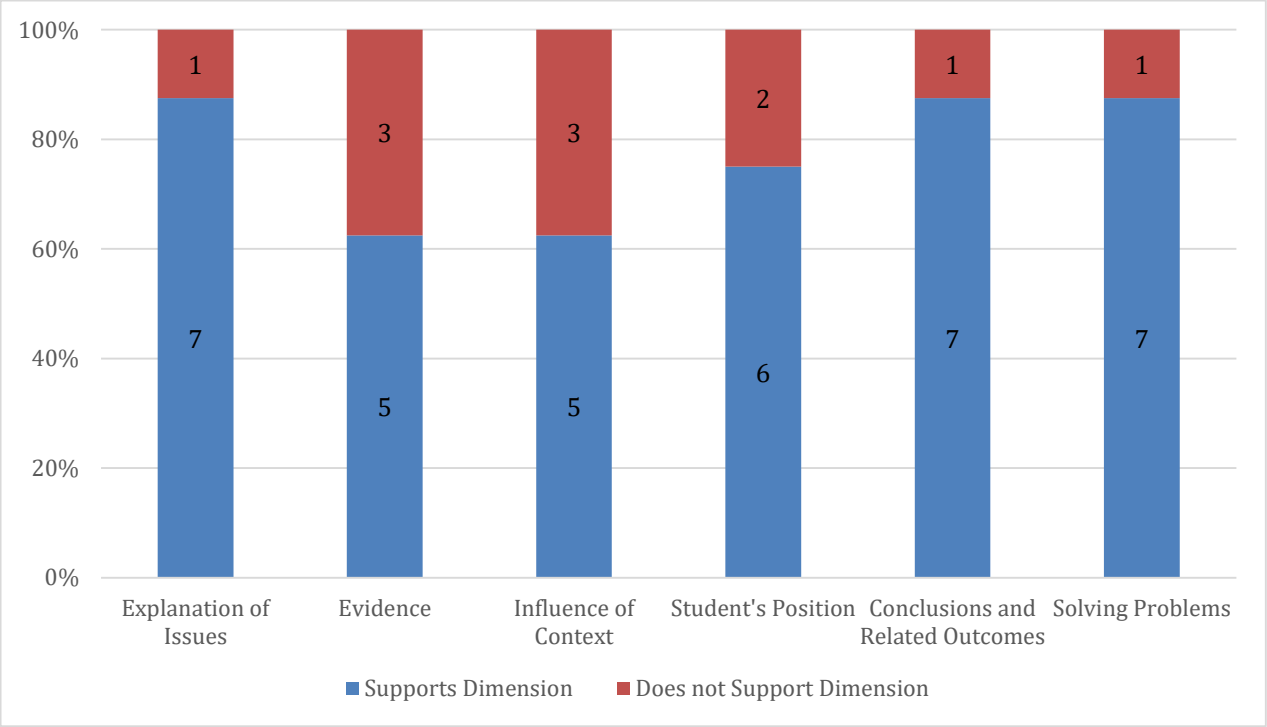


Figure 37. Assignment Design support of Critical Thinking learning outcome dimensions Fall 2016

5. Assignment Design for Scientific Reasoning Spring 2017

Six assignments were submitted for the assessment of Assignment Design for Scientific Reasoning in spring 2017. Of the six assignments assessed, four required evaluations by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

The Analysis and Conclusions, Limitations, and Implications dimensions were the most supported dimensions with 100% of the assignments requiring demonstration of these dimensions (Figure 38). Eighty-three percent (83%) of the assignments supported the Existing Knowledge, Research and/or Views dimension. The least supported dimension was the Argument or Topic Selection dimension with support from 50% of the assignments.

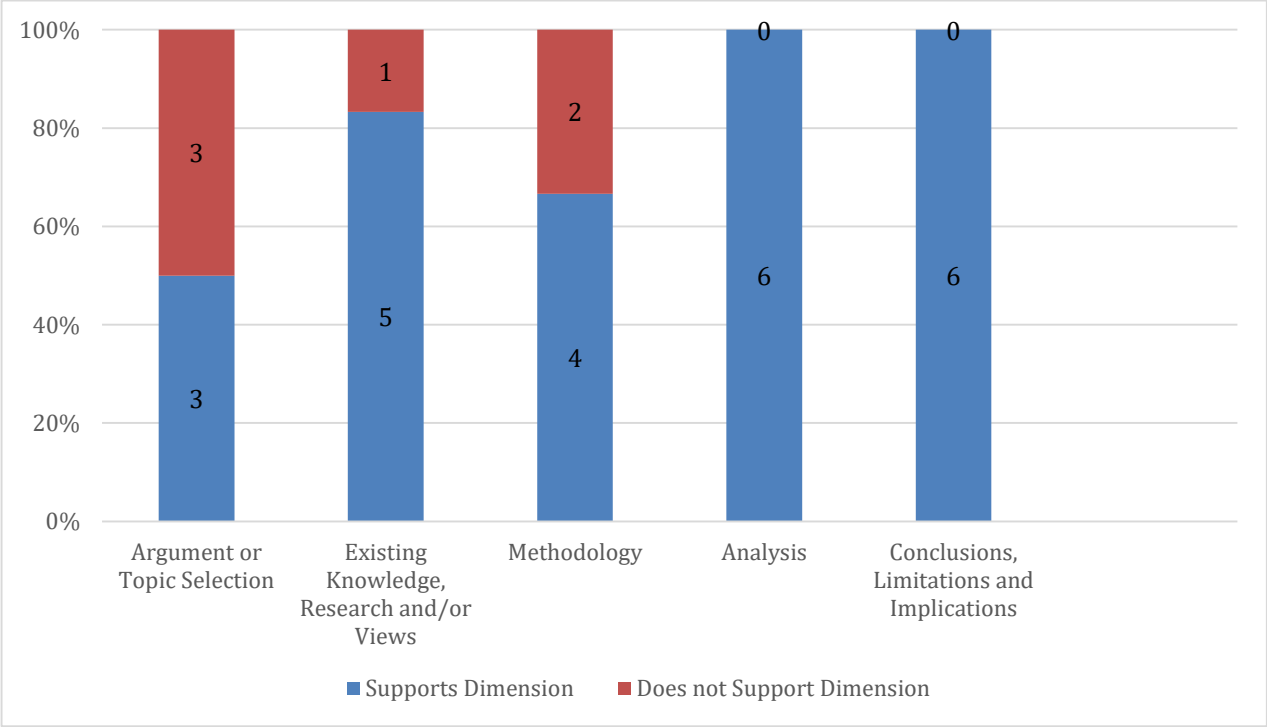


Figure 38. Assignment Design support of Scientific Reasoning learning outcome dimensions spring 2017

6. Assignment Design for Written Communication fall 2017

Ten assignments were submitted for the assessment of Assignment Design for Written Communication in fall 2017. Of the ten assignments assessed, five required evaluations by a third assessor because the scoring between the initial two assessors differed significantly per scoring specifications.

All dimensions were fully supported except Sources and Evidence with support from 70% of the assignments (Figure 39).

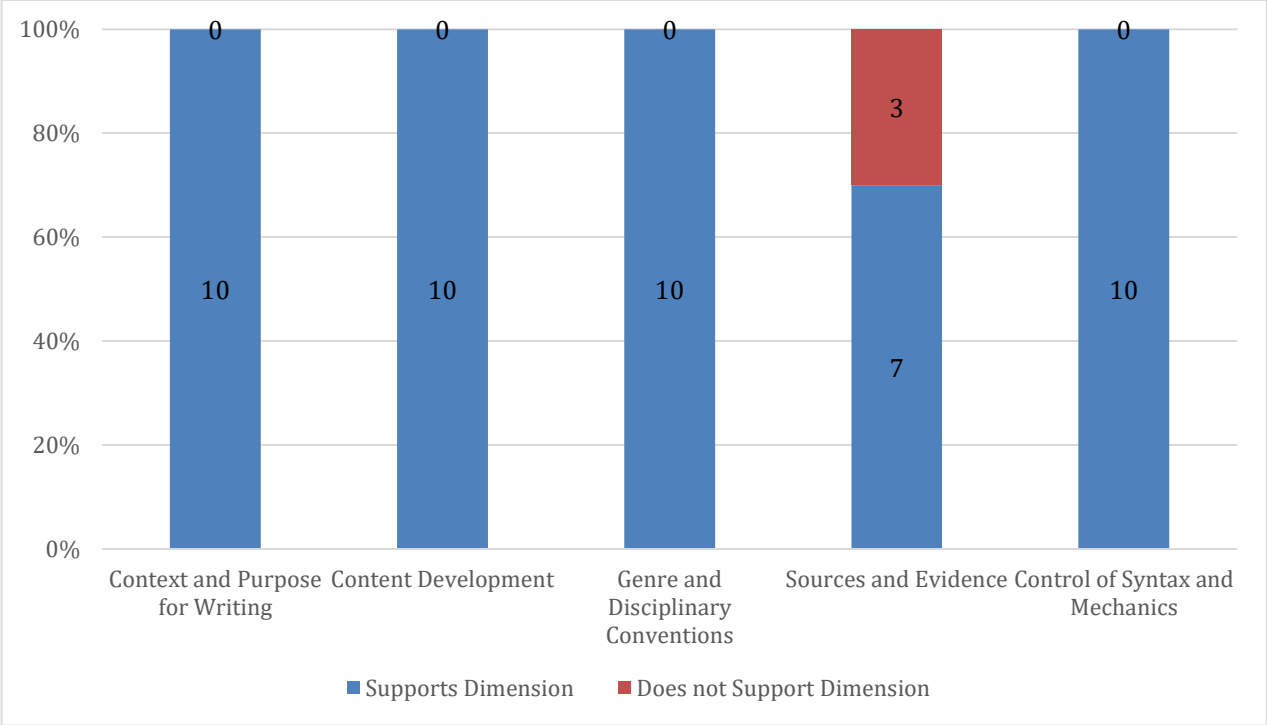


Figure 39. Assignment Design support of Written Communication learning outcome dimensions fall 2017

V. Changes Resulting from Assessment Findings

Assessment findings are reviewed as a cyclical step of the process and serve as the basis for curriculum and pedagogical changes to support student learning (Table 24).

Table 24 provides the initiatives implemented to support student learning based on assessment findings.

Table 24

Initiatives Implemented to Support Student Learning Based on Assessment Findings

Initiative	Status
Policy/Procedure	
Draft and implement Academics Standards Policy 2105 to formalize the role and responsibilities of faculty and academic leaders in general education assessment.	Implemented spring 2015
Form the General Education Committee in accordance with the General Education Course Approval Guidelines to consider new courses for inclusion as general education and approved transfer elective courses and perform periodic reviews of these courses to determine continued eligibility.	Implemented spring 2016
Curriculum	
Annually review/identify the general education competencies supported by each course at the *Learning Institute* and update Official Course Outline in i-INCURR (Appendix G) in accordance with the Timeline for Changes to Official Course Outlines (Appendix H).	Implemented fall 2013
Complete/maintain course mapping process to identify programs which do not support all competencies through course requirements.	Ongoing
Identify gaps in programs which do not support all competencies through course requirements.	Implemented 2015
Establish and enforce standard college-wide course requisites as outlined in Policy and Procedure for Credit Course Requisites, Policy No. 2103.	Implemented

Pedagogy	
Design/edit assignments to support the applicable competencies: • Instruction Committee created/maintains the General Education Assessment Resource System (GEARS) which provides best practices on effective assignment design and sample assignments beginning fall 2015. • Require AAT to be completed and submitted by faculty participating in GEA process beginning in fall 2015[6] (Appendix I). • Assignment Charrette sessions to facilitate collaborative assignment design and review in small groups offered since fall 2017: Four HIS faculty - fall 2017 • Assignment Design workshops offered since fall 2013, available upon request since spring 2017. • Encourage development/implementation of standard assignments or common templates which comprehensively support applicable competencies within courses. Several disciplines within health professions, natural science, geography, and student development have identified and developed standard assignments aligned with the appropriate VALUE rubric for submission to the GEA. • Provide individual assistance with identifying and/or developing assignments which wholly support general education learning outcomes as assignment instructions/templates are submitted by faculty for assessment. Provide comprehensive GEA information as needed.	Ongoing
TCC Libraries developed and conduct standard library instruction sessions for ENG 111, ENG 112, and CST 100 which include the learning outcomes on the Information Literacy rubric as part of the Assessment Action Plan.	Implemented
The Library Instruction Team created and maintains an Effective Teaching Repository including effective pedagogy/andragogy and literacy instruction practices.	Implemented
The Library Instruction Team created and manages an ongoing assessment program to measure student learning of information literacy skills. A common assessment tool is used by all teaching librarians in targeted courses each Spring semester. Spring assessment data are analyzed each Summer and used to inform changes to library instruction and the assessment tool. Changes	Implemented

[6] AAT was revised for spring 2016 based on faculty and Instruction Committee feedback.

to instruction are implemented during the following Fall semester.	
The Library Instruction Team created a forum for teaching librarians to discuss and share effective practices on assessment and its role in library instruction.	Implemented
Provide course and instructor-specific results to applicable faculty to inform pedagogical improvements.	Implemented fall 2015
Bring in national experts to conduct faculty development workshops: Terry Rhodes - 2012 Ashely Finley - 2013 Linda Suskie - 2014 Kathryne McConnell – 2015 Charlie Blaich and Kathleen Wise - 2016	Ongoing
Co-curricular Support	
The Women's Center provides an annual calendar of educational programs to address the Cultural and Social Understanding and Personal Development competencies and provide supportive intercultural academic programs, including an annual yearlong co-curricular program on women's leadership.	Implemented
The Intercultural Learning developed and implemented an annual calendar of academic programs to address the Cultural and Social Understanding competency including: • College-wide intercultural academic programs • Supportive academic programs (speakers, documentaries, discussions, and workshops). • Supporting faculty in developing relevant course content. • Study Abroad program which aligns the proposal process for faculty to present curricular-driven opportunities to address the Cultural and Social Understanding competency with a significant need to incorporate on-ground travel experience.	Implemented
International Student Services engages international students in International Student Services engages international students in curricular and co-curricular programs to support the Cultural and Social Understanding Competency, including orientation and acclimation programs.	Implemented
Faculty Awareness/Participation	
Email faculty with GEA update identifying competencies under assessment and faculty responsibilities before the start of each cycle. Beginning summer 2014, all faculty rather than only those potentially participating in the cycle received this notification to improve general awareness GEA goals, status, and faculty requirements.	Implemented

Members of the Instruction Committee serve as liaisons between faculty in their disciplines and the GEA.	Implemented
Conduct competency-specific assessor training every cycle.	Ongoing
Produce What to Expect from Assessor Training, an informational video, previewing the objectives and content of assessor training sessions. Posted on the GEARS website.	Implemented spring 2016
Offer GEA programming at the annual *Learning Institute*.	Implemented spring 2012
Present GEA-related topics and updates during Convocation.	Implemented spring 2012
Create and maintain "Assessments" tab in i-INCURR to provide electronic access to GEA-related information including links to the competency rubrics, the GEA Tool for scoring SWPs, and this document.	Implemented
Develop and conduct a GEA orientation including assessor training during the New Faculty Academy. An assignment design component was added spring 2016.	Implemented fall 2014
Produce and screen informational video highlighting the purpose and basic processes of the GEA at 2014 Convocation. Video is available for future faculty-centered events.	Implemented
Recognize participation in the GEA process including but not limited to assessor training and scoring as satisfying components faculty evaluation plan.	Implemented
Student Awareness	
Introduce competencies and rubrics to student volunteers from Associate of Science in General Studies Accelerated Degree (GSAD) Program.	Implemented fall 2016
GSAD student volunteers completed GEA training for assignment design assessment and assessed assignment instructions.	Implemented spring 2017
Volunteer ENG 111, ENG 112, HIS 122 and HUM 202 faculty supplied students to provide feedback on whether select assignments from the fall 2017 Written Communication sample supported each dimension of the Written Communication rubric. Results will be provided to authors of assignments.	Initiated fall 2017
GEA Plan	
Instruction Committee reviews, edits, and recommends changes to the GEA Plan annually based on faculty input and assessment results.	Ongoing
Contract consultant with assessment and accreditation expertise for review of and feedback on GEA Plan (Appendix J).	Completed spring 2014
Provide interrater reliability report (Appendix K).	Implemented fall 2015
Create and implement a new process for non-general education courses to focus on Assignment Design in accordance with Policy 2105.	Implemented fall 2015

Slow the rotation of competencies assessed to one competency per cycle to allow more time for structured phases to review findings, identify and implement changes needed, and to evaluate impact of changes as routine steps of the process.	Implemented spring 2016
Review/revise rubrics for better alignment with VCCS general education goals including standardizing language across all publications.	Scientific Reasoning and Critical Thinking initiated spring 2016
Solicit faculty input on expected scores through the AAT.	Implemented Fall 2015

VI. Faculty Training and Education

At the annual *Learning Institute* in 2012 and 2013, AAC&U representatives provided training to faculty volunteers who were interested in assessing student learning using the TCC adapted AAC&U Value Rubrics. Thirty-five faculty were trained in each session, with 54 total faculty trained during the 2012-13 academic year.

Faculty are encouraged to attend faculty assessor training sessions which are offered during each cycle of the assessment. The competencies assessed in the training sessions are the same competencies which will be assessed during the assessment cycle. Special invitations to attend faculty assessor training have been extended to those with expertise related to the competencies under assessment in the upcoming cycle. For example, librarians were invited to faculty assessor training in fall 2014 prior to the assessment of Information Literacy. Faculty in science-related disciplines were encouraged to attend training in spring 2015 prior to the assessment of Scientific Reasoning.

As of fall 2017, a total of 164 faculty members completed training.

VII. Appendices

Appendix A: General Education Core Competencies

GENERAL EDUCATION CORE COMPETENCIES

TCC/VCCS

Tidewater Community College (TCC) has defined the general education core competencies that all its graduates from associate degree programs should have attained as the following:

1. Communication – A competent communicator can interact with others using all forms of communication, resulting in understanding and being understood. TCC graduates will demonstrate the ability to understand and interpret complex materials; assimilate, organize, develop, and present an idea formally and informally; use standard English; use appropriate verbal and non-verbal responses in interpersonal relations and group discussions; use listening skills; and recognize the role of culture in communication.

2. Critical Thinking – A competent critical thinker evaluates evidence carefully and applies reasoning to decide what to believe and how to act. TCC graduates will demonstrate the ability to discriminate among degrees of credibility, accuracy, and reliability of inferences drawn from given data; recognize parallels, assumptions, or presuppositions in any given source of information; evaluate the strengths and relevance of arguments on a particular question or issue; weigh evidence and decide if generalizations or conclusions based on the given data are warranted; determine whether certain conclusions or consequences are supported by the information provided; and use problem solving skills.

3. Cultural and Social Understanding – A culturally and socially competent person possesses an awareness, understanding, and appreciation of the interconnectedness of the social and cultural dimensions within and across local, regional, state, national, and global communities. TCC graduates will demonstrate the ability to assess the impact that social institutions have on individuals and culture—past, present, and future; describe their own as well as others' personal ethical systems and values within social institutions; recognize the impact that arts and humanities have upon individuals and cultures; recognize the role of language in social and cultural contexts; and recognize the interdependence of distinctive world-wide social, economic, geo-political, and cultural systems.

4. Information Literacy – A person who is competent in information literacy recognizes when information is needed and has the ability to locate, evaluate, and use it effectively. TCC graduates will demonstrate the ability to determine the nature and extent of information needed; access needed information

effectively and efficiently; evaluate information and its sources critically and incorporate selected information into his or her knowledge base; use information effectively, individually or as a member of a group, to accomplish a specific purpose; and understand many of the economic, legal, and social issues surrounding the use of information and access and use information ethically and legally.

5. Personal Development – An individual engaged in personal development strives for physical and/or emotional well-being. TCC graduates will demonstrate the ability to a. Develop and/or refine personal wellness goals; and b. Develop and/or enhance the knowledge, skills and understanding to make informed academic, social personal, career, and interpersonal decisions.

6. Quantitative Reasoning – A person who is competent in reasoning possesses the skills and knowledge necessary to apply the use of logic, numbers, and mathematics to deal effectively with common problems and issues. A person who is quantitatively literate can use numerical, geometric, and measurement data and concepts, mathematical skills, and principles of mathematical reasoning to draw logical conclusions and to make well-reasoned decisions. TCC graduates will demonstrate the ability to use logical and mathematical reasoning with the context of various disciplines; interpret and use mathematical formulas; interpret mathematical models such as graphs, tables and schematics and draw inferences from them; use graphical, symbolic, and numerical methods to analyze, organize, and interpret data; estimate and consider answers to mathematical problems in order to determine reasonableness; and represent mathematical information numerically, symbolically, and visually using graphs and charts.

7. Scientific Reasoning – A person who is competent in scientific reasoning adheres to a self-correcting system of inquiry (the scientific method) and relies on empirical evidence to describe, understand, predict, and control natural phenomena. TCC graduates will demonstrate the ability to generate an empirically evidenced and logical argument; distinguish a scientific argument from a non-scientific argument; reason by deduction, induction and analogy; distinguish between causal and correlational relationships; and recognize methods of inquiry that lead to scientific knowledge.

Appendix B: General Education Degree Requirements

Table 5-1A
VCCS Degree Requirements

<table>
<tr><th colspan="2">Area</th><th>Distribution</th></tr>
<tr><td colspan="2">GENERAL EDUCATION
General education is that portion of the collegiate experience that addresses the knowledge, skills, attitudes, and values characteristic of educated persons. It is unbounded by disciplines and honors the connections among bodies of knowledge. The associate degree programs within the VCCS support a collegiate experience that focuses on seven goal areas: communication; critical thinking; cultural and social understanding; information literacy; personal development; quantitative reasoning; scientific reasoning.) The general education goal areas outlined below are to be introduced in the foundational courses and enhanced in program and elective courses. (NOTE: Some of the categories include two goal areas when a single course may provide foundations in both goal areas.)</td><td rowspan="4">Minimum 15 credits

(Students must take at least one course in each of the five areas listed, to total at least 15 credits.)</td></tr>
<tr><td>I. Foundations In Communication:
Courses designed to enable students to interact with others using all forms of communication, resulting in understanding and being understood.</td><td>II. Foundations In Critical Thinking And Information Literacy:
Courses designed to enable students to evaluate evidence carefully and apply reasoning to decide what to believe and how to act, and to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.</td></tr>
<tr><td>III. Foundations In Cultural And Social Understanding:
Courses designed to enable students to have an awareness, understanding, and appreciation of the interconnectedness of the social and cultural dimensions within and across local, regional, state, national, and global communities.</td><td>IV. Foundations In Personal Development:
Courses designed to enable students to strive for physical well-being and emotional maturity.</td></tr>
<tr><td colspan="2">V. Foundations In Quantitative And Scientific Reasoning:
Courses designed to enable students to possess the skills and knowledge necessary to apply the use of logic, numbers, and mathematics to deal effectively with common problems and issues, and to adhere to a self-correcting system of inquiry (the scientific method) and rely on empirical evidence to describe, understand, predict, and control natural phenomena.</td></tr>
<tr><td colspan="2">PROGRAM REQUIREMENTS
Major Field Core
Related/Specialization Courses
Electives</td><td>Minimum 15 credits*
Maximum 15 credits
0-15 credits</td></tr>
<tr><td colspan="2" rowspan="2">TOTALS</td><td>AA/AS/AA&S:
60-63 credits**</td></tr>
<tr><td>AAA/AAS:
65-69 credits***</td></tr>
</table>

*Language in Section 5.1.0.0.1 of the VCCS Policy Manual states 25% of the courses in the degree program (15-18 credits) must be common across majors within a degree. The shared courses must be major or related/specialization courses.
**Credit range for engineering programs is 60-72 semester hour credits.
***Credit range for AAA/AAS programs is 65-69, including nursing. For other programs in the Health Technologies, the range is 65-72 semester hour credits.

Table 5-1
Minimum Requirements for Associate Degrees in the VCCS

General Education:	Minimum Number of Semester Hour Credits (1) AA	(2) AS	(3) AA&S	(4) AFA	(5) AAA / AAS	
Communication	6	6	6	6	3-6	
Humanities / Fine Arts	6	6	6	3-9[c]	3-6	
Foreign Language (Intermediate Level)	6	0	0	0	0	
Social / Behavioral Sciences	9	9[a]	9	3-9	3-6	
Natural Sciences /	7-8	7-8	7-8	4	0	
Mathematics	6	6[b]	6[b]	3	0	}3-6
Total for General Education =	40-41	34-35	34-35	19-28	15	
As specified above, degree programs must contain a minimum of 15 semester hours of general education as defined by SACSCOC.						
Other Requirements for Associate Degrees:						
Personal Development						
Personal development is defined as general education per VCCS policy (5.0.2.2) but cannot be used to meet the general education requirements of SACSCOC in degree programs.	1-2	1-2	1-2	1-2	1-2	
Major field courses and electives (columns 1-4) Career/technical courses (column 5)	17-22	23-28	23-28	34-43	43-53	
Total for Degree =	60-63	60-63	60-63	60-63	60-69	

Notes:
[a] Only 6 semester hours of social/behavioral sciences are required for engineering majors who plan to transfer to a baccalaureate degree engineering program that requires 6 or fewer hours in this category, provided that the college/university publishes such requirements in its transfer guide.
[b] A minimum of 3 semester hours of mathematics is required for the General Studies major in the Associate of Science and Associate of Arts and Sciences degrees.
[c] One course in humanities/fine arts for the Fine Arts major must be a literature course.

Appendix C: VALUE Rubrics

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WRITTEN COMMUNICATION RUBRIC

DEFINITION

Written communication is the development and expression of ideas in writing resulting in understanding and being understood. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum. A competent written communicator demonstrates the ability to: understand and interpret complex materials; assimilate, organize, develop, and present an idea formally and informally; use standard English; and recognizes the role of culture in communication.

FRAMING LANGUAGE

This rubric focuses assessment on how specific written work samples or collections of work respond to specific contexts. The central question guiding the rubric is "How well does writing respond to the needs of audience(s) for the work?" In focusing on this question the rubric does not attend to other aspects of writing that are equally important: issues of writing process, writing strategies, writers' fluency with different modes of textual production or publication, or writer's growing engagement with writing and disciplinarity through the process of writing.

Evaluators using this rubric must have information about the assignments or purposes for writing guiding writers' work. Also recommended is including reflective work samples of collections of work that address such questions as: What decisions did the writer make about audience, purpose, and genre as s/he compiled the work in the portfolio? How are those choices evident in the writing – in the content, organization and structure, reasoning, evidence, mechanical and surface conventions, and citational systems used in the writing? This will enable evaluators to have a clear sense of how writers understand the assignments and take it into consideration as they evaluate.

The first section of this rubric addresses the context and purpose for writing. A work sample or collections of work can convey the context and purpose for the writing tasks it showcases by including the writing assignments associated with work samples. But writers may also convey the context and purpose for their writing within the texts. It is important for faculty and institutions to include directions for students about how they should represent their writing contexts and purposes.

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WRITTEN COMMUNICATION RUBRIC

GLOSSARY

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Content Development:** The ways in which the text explores and represents its topic in relation to its audience and purpose.

- **Context of and purpose for writing:** The context of writing is the situation surrounding a text: who is reading it? who is writing it? Under what circumstances will the text be shared or circulated? What social or political factors might affect how the text is composed or interpreted? The purpose for writing is the writer's intended effect on an audience. Writers might want to persuade or inform; they might want to report or summarize information; they might want to work through complexity or confusion; they might want to argue with other writers, or connect with other writers; they might want to convey urgency or amuse; they might write for themselves or for an assignment or to remember.

- **Disciplinary conventions**: Formal and informal rules that constitute what is seen generally as appropriate within different academic fields, e.g. introductory strategies, use of passive voice or first person point of view, expectations for thesis or hypothesis, expectations for kinds of evidence and support that are appropriate to the task at hand, use of primary and secondary sources to provide evidence and support arguments and to document critical perspectives on the topic. Writers will incorporate sources according to disciplinary and genre conventions, according to the writer's purpose for the text. Through increasingly sophisticated use of sources, writers develop an ability to differentiate between their own ideas and the ideas of others, credit and build upon work already accomplished in the field or issue they are addressing, and provide meaningful examples to readers.

- **Evidence:** Source material that is used to extend, in purposeful ways, writers' ideas in a text.

- **Genre conventions:** Formal and informal rules for particular kinds of texts and/or media that guide formatting, organization, and stylistic choices, e.g. lab reports, academic papers, poetry, webpages, or personal essays.

- **Sources:** Texts (written, oral, behavioral, visual, or other) that writers draw on as they work for a variety of purposes -- to extend, argue with, develop, define, or shape their ideas, for example.

WRITTEN COMMUNICATION RUBRIC

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Context of and Purpose for Writing *Includes consideration of audience, purpose, and the circumstances surrounding the writing task(s).*	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).
Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, convey the writer's understanding, and shape the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
Genre and Disciplinary Conventions *Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).*	Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices.	Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices.	Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation.	Attempts to use a consistent system for basic organization and presentation.
Sources and Evidence	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
Control of Syntax and Mechanics	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors. information.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.

INFORMATION LITERACY RUBRIC

DEFINITION

The ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand (Adopted from the National Forum on Information Literacy). A person who is competent in information literacy demonstrates the ability to: determine the nature and extent of the information needed; access needed information effectively and efficiently; evaluate information and its sources critically and incorporate selected information into his or her knowledge base; and understand many of the economic, legal, and social issues surrounding the use of information and use information ethically and legally.

FRAMING LANGUAGE

This rubric is recommended for use evaluating a collection of work, rather than a single work sample in order to fully gauge students' information skills. Ideally, a collection of work would contain a wide variety of different types of work and might include: research papers, editorials, speeches, grant proposals, marketing or business plans, PowerPoint presentations, posters, literature reviews, position papers, and argument critiques to name a few. In addition, a description of the assignments with the instructions that initiated the student work would be vital in providing the complete context for the work. Although a student's final work must stand on its own, evidence of a student's research and information gathering processes, such as a research journal/diary, could provide further demonstration of a student's information proficiency and for some criteria on this rubric would be required.

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INFORMATION LITERACY RUBRIC				
	Capstone 4	**Milestones** 3	2	**Benchmark** 1
Determine the nature and extent of information needed.	Effectively defines the scope of the research question or thesis. Effectively determines key concepts. All types of information (sources) selected directly relate to concepts or answer research question.	Defines the scope of the research question, thesis or problem completely. Can determine key concepts. Most types of information (sources) selected relate to concepts or answer research question.	Defines the scope of the question, thesis or problem incompletely (parts are missing, remains too broad or too narrow, etc.). Can determine key concepts. Types of information (sources) selected partially relate to concepts or answer research question.	Has difficulty defining the scope of the question, thesis or problem. Has difficulty determining key concepts. Types of information (sources) selected do not relate to concepts or answer research question.
Access the needed information effectively and efficiently.	Accesses information using effective, well-designed search strategies and most appropriate information sources.	Accesses information using variety of search strategies and refined information sources. Demonstrates ability to refine search.	Accesses information using simple search strategies, retrieves relevant information from limited and similar sources.	Accesses information randomly, retrieves information that lacks relevance and quality.
Evaluate information and its sources critically and incorporate selected information into his or her knowledge base.	Systematically and methodically analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Has difficulty distinguishing between an assertion and an assumption. Begins to identify some contexts when presenting a position.
Use information effectively, individually or as a member of a group to accomplish a specific purpose.	Communicates, organizes and synthesizes information from sources to fully achieve a specific purpose, with clarity and depth.	Communicates, organizes and synthesizes information from sources. Intended purpose is achieved.	Communicates and organizes information from sources/accurately quoted, used in context, correctly paraphrased, etc.). The information is not completely synthesized, so the intended purpose is not fully achieved.	Communicates information from sources. The information is fragmented and/or used inappropriately (misquoted, taken out of context, incorrectly paraphrased, etc.), so the intended purpose is not achieved.
Applies many of the economic, legal and social issues surrounding the use of information and access and use information ethically and legally.	Students use correctly all of the following information use strategies: • use of citations and references • choice of paraphrasing, summary, or quoting • using information in ways that are true to original context • distinguishing between common knowledge and ideas requiring attribution Demonstrates an understanding of the ethical, economic, legal and social issues on the use of published, confidential, and/or proprietary information.	Students use correctly three of the following information use strategies: • use of citations and references • choice of paraphrasing, summary, or quoting • using information in ways that are true to original context • distinguishing between common knowledge and ideas requiring attribution Demonstrates an understanding of the ethical, economic, legal and social issues on the use of published, confidential, and/or proprietary information.	Students use correctly two of the following information use strategies: • use of citations and references • choice of paraphrasing, summary, or quoting • using information in ways that are true to original context • distinguishing between common knowledge and ideas requiring attribution Demonstrates an understanding of the ethical, economic, legal and social issues on the use of published, confidential, and/or proprietary information.	Students use correctly one of the following information use strategies: • use of citations and references • choice of paraphrasing, summary, or quoting • using information in ways that are true to original context • distinguishing between common knowledge and ideas requiring attribution Demonstrates an understanding of the ethical, economic, legal and social issues on the use of published, confidential, and/or proprietary information.

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CRITICAL THINKING RUBRIC

DEFINITION

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.A person who is competent in critical thinking evaluates evidence carefully and applies reasoning to decide what to believe and how to act. A person with competency in this area demonstrates the ability to demonstrate among degrees of credibility, accuracy, and reliability of inferences drawn from given data; recognizes parallels, assumptions, or presuppositions in any given source of information; evaluates the strengths and relevance of arguments on a particular question or issue; weighs evidence and decides if generalizations or conclusions based on the given data are warranted; determines whether certain conclusions or consequences are supported by the information provided; and uses problem solving skills.

FRAMING LANGUAGE

This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all walks of life.

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Assignments that cut across presentation mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information sources were evaluated regardless of whether they were included in the product) is important, assignments focused on student reflection might be especially illuminating.

GLOSSARY

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Ambiguity:** Information that may be interpreted in more than one way.
- **Assumptions:** Ideas, conditions, or beliefs (often implicit or unstated) that are "taken for granted or accepted as true without proof." (quoted from www.dictionary.reference.com/browse/assumptions)
- **Context:** The historical, ethical, political, cultural, environmental, or circumstantial settings or conditions that influence and complicate the consideration of any issues, ideas, artifacts, and events.
- **Literal meaning:** Interpretation of information exactly as stated. For example, "she was green with envy" would be interpreted to mean that her skin was green.
- **Metaphor:** Information that is (intended to be) interpreted in a non-literal way. For example, "she was green with envy" is intended to convey an intensity of emotion, not a skin color.

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CRITICAL THINKING VALUE RUBRIC

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Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	2	Benchmark 1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Evidence Selecting and using information to investigate a point of view or conclusion	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Differentiates between self and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/ hypothesis)	Specific position (perspective, thesis/ hypothesis) is creative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and well supported; reflect student's informed evaluation, demonstrating ability to weigh evidence and place perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly; evidence is generally well supported.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly; support of evidence is limited.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified; little to no support of evidence.
Solving Problems	Not only develops a logical, consistent plan to solve a problem, but recognizes consequences of a solution and can articulate reasons for choosing a solution.	Having selected from among several approaches, develops a logical, consistent plan that considers how to solve a problem.	Considers and rejects less acceptable approaches to solving a problem.	Only a single approach is considered and is used to solve a problem.

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QUANTITATIVE REASONING RUBRIC

DEFINITION

Quantitative Reasoning (QR) is a "habit of mind," competency, and comfort in working with numerical data. Individuals with strong QR skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate). A person who is competent in quantitative reasoning can use numerical, geometric, and measurement data and concepts, mathematical skills, and principles of mathematical reasoning to draw logical conclusions and to make well-reasoned decisions; the person demonstrates the ability to: use logical and mathematical reasoning within the context of various disciplines; interpret and use mathematical formulas; interpret mathematical models and draw inferences from them; use graphical, symbolic, and numerical methods to analyze, organize, and interpret data; and, estimate and consider answers to mathematical problems in order to determine reasonableness.

FRAMING LANGUAGE

This rubric has been designed for the evaluation of work that addresses quantitative reasoning in a substantive way. QR is not just computation, not just the citing of someone else's data. QR is a habit of mind, a way of thinking about the world that relies on data and on the mathematical analysis of data to make connections and draw conclusions. Teaching QR requires us to design assignments that address authentic, data-based problems. Such assignments may call for the traditional written paper, but we can imagine other alternatives: a video of a PowerPoint presentation, perhaps, or a well designed series of web pages. In any case, a successful demonstration of QR will place the mathematical work in the context of a full and robust discussion of the underlying issues addressed by the assignment.

Finally, QR skills can be applied to a wide array of problems of varying difficulty, confounding the use of this rubric. For example, the same student might demonstrate high levels of QR achievement when working on a simplistic problem and low levels of QR achievement when working on a very complex problem. Thus, to accurately assess a students QR achievement it may be necessary to measure QR achievement within the context of problem complexity, much as is done in diving competitions where two scores are given, one for the difficulty of the dive, and the other for the skill in accomplishing the dive. In this context, that would mean giving one score for the complexity of the problem and another score for the QR achievement in solving the problem.

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QUANTITATIVE REASONING *VALUE* RUBRIC

(For more information, please contact value@aacu.org)

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Interpretation *Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)*	Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. *For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.*	Provides accurate explanations of information presented in mathematical forms. *For instance, accurately explains the trend data shown in a graph.*	Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. *For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.*	Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. *For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.*
Representation *Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)*	Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.	Competently converts relevant information into an appropriate and desired mathematical portrayal.	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.
Calculation	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.	Calculations are attempted but are both unsuccessful and are not comprehensive.
Application / Analysis *Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis*	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Uses the quantitative analysis of data as the basis for inappropriate, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.
Assumptions *Ability to make and evaluate important assumptions in estimation, modeling, and data analysis*	Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.	Explicitly describes assumptions.	Attempts to describe assumptions.
Communication *Expressing quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)*	Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.	Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.	Uses quantitative information, but does not effectively connect it to the argument or purpose of the work.	Presents an argument for which quantitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as "many," "few," "increasing," "small," and the like in place of actual quantities.)

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SCIENTIFIC REASONING RUBRIC

DEFINITION

Scientific Reasoning is an adherence to a self-correcting system of inquiry and a reliance on empirical evidence to describe, understanding, predict, and control natural phenomena.

FRAMING LANGUAGE

This rubric has been designed for the evaluation of work that addresses scientific reasoning in a substantive way. A person who is competent in scientific reasoning will demonstrate the ability to: generate an empirically evidenced and logical argument; distinguish a scientific argument from a non-scientific argument; reason by deduction, induction, and analogy; distinguish between causal and correlational relationships; and recognize methods of inquiry that lead to scientific knowledge.

GLOSSARY

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Conclusions:** A synthesis of key findings drawn from research/evidence.
- **Limitations:** Critique of the process or evidence.
- **Implications:** How inquiry results apply to a larger context or the real world.
- **Empirical:** Originating in or based on observation or experience.
- **Deduction:** Deriving of a conclusion by reasoning.
- **Induction:** Inference of a generalized conclusion from particular instances.
- **Analogy:** Resemblance in some particulars between things otherwise unlike.
- **Causal:** Expressing or indicating cause.
- **Correlation:** A relation existing between phenomena or things or between or between mathematical or statistical variables which tend to vary, be associated, or occur together in a way not expected on the basis of chance alone.

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SCIENTIFIC REASONING VALUE RUBRIC

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Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Argument or Topic selection: Generating an empirically evidenced and logical argument	Identifies a creative, focused, and manageable argument or topic that addresses potentially significant yet previously less explored aspects.	Identifies a focused and manageable/doable argument or topic that appropriately addresses relevant aspects.	Identifies an argument or topic that while manageable/doable, is too narrowly focused and leaves out relevant aspects.	Identifies an argument or topic that is far too general and wide-ranging as to be manageable and doable.
Existing Knowledge, Research, and/or Views Distinguishing a scientific argument from a non-scientific argument	Synthesizes in-depth information from credible and relevant sources representing various points of view/ approaches.	Presents in-depth information from credible and relevant sources representing various points of view/ approaches.	Presents information from credible and relevant sources representing limited points of view/approaches.	Presents information from non-credible and irrelevant sources representing limited points of view/ approaches.
Methodology: Recognizing methods of inquiry that lead to scientific knowledge	All elements of the methodology or theoretical framework are skillfully developed. Appropriate methodology or theoretical frameworks may be synthesized from across disciplines or from relevant subdisciplines.	Critical elements of the methodology or theoretical framework are appropriately developed, however, more subtle elements are ignored or unaccounted for.	Critical elements of the methodology or theoretical framework are missing, incorrectly developed, or unfocused.	Inquiry demonstrates a misunderstanding of the methodology or theoretical framework.
Analysis Reasoning by deduction, induction, and analogy	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus. Demonstrates elegant ability to reason by deduction, induction, and analogy.	Organizes evidence to reveal important patterns, differences, or similarities related to focus. Demonstrates appropriate ability to reason by deduction, induction, and analogy.	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities. Demonstrates limited ability to reason by deduction, induction, and analogy.	Lists evidence, but it is not organized and/or is unrelated to focus. Demonstrates no ability to reason by deduction, induction, and analogy.
Conclusions, Limitations and Implications: Distinguishing between causal and correlational relationships	States a conclusion that is a logical extrapolation from the inquiry findings; limitations and implications. Demonstrates advanced ability to distinguish between causal and correlational relationships.	States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings; limitations and implications. Demonstrates appropriate ability to distinguish between causal and correlational relationships.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings; limitations and implications. Demonstrates limited ability to distinguish between causal and correlational relationships.	States an ambiguous, illogical, or unsupportable conclusion from inquiry findings; limitations and implications. Demonstrates no ability to distinguish between causal and correlational relationships.

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ORAL COMMUNICATION RUBRIC

The type of oral communication most likely to be included in a collection of student work is an oral presentation and therefore is the focus for the application of this rubric.

DEFINITION

A person competent in oral communication demonstrates the ability to understand and interpret complex materials; assimilate, organize, develop, and present an idea formally and informally; use standard English; use appropriate verbal and non-verbal responses in interpersonal relations and group discussions; use listening skills; and recognize the role of culture in communication.

FRAMING LANGUAGE

Oral communication takes many forms. This rubric is specifically designed to evaluate oral presentations of a single speaker at a time and is best applied to live or video-recorded presentations. For panel presentations or group presentations, it is recommended that each speaker be evaluated separately. This rubric best applies to presentations of sufficient length such that a central message is conveyed, supported by one or more forms of supporting materials and includes a purposeful organization. An oral answer to a single question not designed to be structured into a presentation does not readily apply to this rubric.

GLOSSARY

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Content Development & Central message:** The main point/thesis/"bottom line"/"take-away" of a presentation. A clear central message is easy to identify; a compelling central message is also vivid and memorable.
- **Delivery techniques:** Posture, gestures, eye contact, and use of the voice. Delivery techniques enhance the effectiveness of the presentation when the speaker stands and moves with authority, looks more often at the audience than at his/her speaking materials/notes, uses the voice expressively, and uses few vocal fillers ("um," "uh," "like," "you know," etc.).
- **Language:** Vocabulary, terminology, and sentence structure. Language that supports the effectiveness of a presentation is appropriate to the topic and audience, grammatical, clear, and free from bias. Language that enhances the effectiveness of a presentation is also vivid, imaginative, and expressive.
- **Organization**: The grouping and sequencing of ideas and supporting material in a presentation. An organizational pattern that supports the effectiveness of a presentation typically includes

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ORAL COMMUNICATION RUBRIC

an introduction, one or more identifiable sections in the body of the speech, and a conclusion. An organizational pattern that enhances the effectiveness of the presentation reflects a purposeful choice among possible alternatives, such as a chronological pattern, a problem-solution pattern, an analysis-of-parts pattern, etc., that makes the content of the presentation easier to follow and more likely to accomplish its purpose.

- **Supporting material:** Explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities, and other kinds of information or analysis that supports the principal ideas of the presentation. Supporting material is generally credible when it is relevant and derived from reliable and appropriate sources. Supporting material is highly credible when it is also vivid and varied across the types listed above (e.g., a mix of examples, statistics, and references to authorities). Supporting material may also serve the purpose of establishing the speaker's credibility. For example, in presenting a creative work such as a dramatic reading of Shakespeare, supporting evidence may not advance the ideas of Shakespeare, but rather serve to establish the speaker as a credible Shakespearean actor. An accurate oral citation gives the audience member enough information that they could easily locate a source if they needed to. An inaccurate oral citation would be "According the New York Times 9 0ut of 10 people…" An accurate oral citation would be "According to a July 6th 2012 New York Times article titled *Seat Belt use in America*, written by Jonhanna Smith 9 out of 10 people…"

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ORAL COMMUNICATION VALUE RUBRIC

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Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced, but is not explicitly stated in the presentation.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or established the presenter's credibility/ authority on the topic. All outside sources used during the presentation are accurately cited orally.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that supports the presentation or establishes the presenter's credibility/ authority on the topic. Some outside sources used during the presentation are accurately cited orally.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or established the presenter's credibility/authority on the topic. Outside sources used during the presentation are referenced, but not clearly cited.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that minimally supports the presentation or established the presenter's credibility/authority on the topic. Outside sources used in presentation are not orally cited.

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CULTURAL AND SOCIAL UNDERSTANDING RUBRIC

DEFINITION

The Virginia Community College System defines a socially and culturally competent person as one who possesses an awareness, understanding, and appreciation of the interconnectedness of the social and cultural dimensions within and across local, regional, state, national, and global communities. Degree graduates will demonstrate the ability to: assess the impact that social institutions have on individuals and cultures—past, present, and future; describe their own as well as others' personal ethical systems and values within social institutions; recognize the impact that arts and humanities have upon individuals and cultures; recognize the role of language in social and cultural contexts; and, recognize the interdependence of distinctive world-wide social, economic, geopolitical, and cultural systems.

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CULTURAL AND SOCIAL UNDERSTANDING VALUE RUBRIC

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	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Knowledge Assess the impact that institutions have on individuals and culture—past, present, and future.	Student is able to articulate insights into the impact and interrelationship between all social institutions (these might include government, education, religion, family, language or the economy) and culture—past, present, and future. Student is able to categorize these impacts (between individual and cultural).	Student is able to demonstrate significant awareness of social institutions and their impact on individuals and culture. In doing so, student is able to identify three or more social institutions (these might include government, education, religion, family, language or the economy) and has demonstrated some understanding of the past, present, and future impacts that these institutions have upon individuals and culture.	Student is able to demonstrate some awareness of social institutions and their current, past, or future impact on individuals and culture. In doing so, student is able to identify at least two social institutions (these might include government, education, religion, family, language or the economy) and has demonstrated some broad understanding of the interconnectedness between these institutions and individuals or culture.	Student is able to describe only a minimal awareness of social institutions and their impact on culture. Student is able to identify fewer than two social institutions (e.g. government, education, religion, family, language, or the economy). Student has not demonstrated an awareness of the current interconnectedness of social institutions and individuals or cultures.
Knowledge Describes their own as well as others' personal ethical systems and values within social institutions.	Student is able to demonstrate a broad understanding of ethical systems. Student is aware of and able to describe numerous aspects of their own ethical systems (e.g. moral obligations, beliefs for human conduct, and standards for societal or business behavior). Student demonstrates a thorough understanding of the relationship between their ethical system and social institutions and is able to compare their own standards with systems espoused by others.	Student is able to demonstrate a general understanding of ethical systems. Student is aware of and able to describe several aspects of their own ethical systems (e.g. moral obligations, beliefs for human conduct, and standards for societal or business behavior). Student can demonstrate either an understanding of the relationship between their ethical system and social institutions or be able to compare their own standards with systems espoused by others.	Student is able to demonstrate some understanding of ethical systems. Student is aware of and able to describe one or more aspect(s) of their own ethical systems (e.g. moral obligations, beliefs for human conduct, and standards for societal or business behavior) but is unable to relate these aspects to social institutions or compare them to systems espoused by others.	Student is able to describe only a minimal awareness of ethical systems. Student is unable to identify any distinguishing features of their own ethical system (e.g. moral obligations, beliefs for human conduct, and standards for societal or business behavior).
Skills Recognize the impact that the arts and humanities have upon individuals and cultures.	Student is able to articulate a broad understanding of the relationship between arts (e.g. theater, music, visual) and humanities (e.g. language, literature, philosophy and history) and individuals and cultures. Multiple connections are made between these elements.	Student is able to describe numerous impacts that arts (e.g. theater, music, visual) or humanities (e.g. language, literature, philosophy and history) may have upon individuals or cultures. Student is able to outline interconnectedness between numerous aspects of arts/humanities and culture.	Student is able to describe two or fewer impacts that arts (e.g. theater, music, visual) or humanities (e.g. language, literature, philosophy and history) may have upon individuals or cultures.	Students are able to describe only a basic impact that arts (e.g. theater, music, visual) and humanities (e.g. language, literature, philosophy and history) have on individuals and cultures.
Skills Recognize the role of language in social and cultural contexts.	Students recognize the role of language in social and cultural contexts. Students can discriminate between different aspects of language forms and styles in difference social settings (e.g. at home, in community, in professional setting).	Students are aware of and can describe the role of language in social and cultural contexts. Students are able to differentiate among communication forms and styles in numerous social settings (e.g. at home, in community, in professional setting).	Students are able to demonstrate a minimal awareness of the relationship between language and cultural contexts. Student displays some understanding of how languages adapt to different social and cultural contexts (e.g. at home, in community, in professional setting).	Students have little to no awareness of the relationship between language and cultural contexts. Students cannot differentiate among communication forms or styles in various social settings (e.g. at home, in community, in professional setting).
Skills Recognize the interdependence of distinctive world-wide social, economic, geo-political, and cultural systems.	Student is able to demonstrate an understanding of and is able to differentiate between the interdependence of each of the following distinctive world-wide systems: social, economic, geo-political, and cultural systems. Student is able to distinguish between world-wide systems and outline individual systems' interdependence.	Student recognizes and demonstrates understanding of the interdependence of three or more of the following distinctive world-wide systems: social, economic, geo-political, and cultural systems. Student demonstrates an understanding of the interdependences of several world-wide systems.	Student recognizes an understanding of the existence of one or two of the following distinctive world-wide systems: social, economic, geo-political, or cultural. Student displays some awareness of the interdependence of any two (or more) world-wide systems.	Student is able to demonstrate a minimal awareness of the existence of at least one of the following: distinctive world-wide systems: social, economic, geo-political, or cultural.

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Association of American Colleges and Universities

PERSONAL DEVELOPMENT RUBRIC

DEFINITION

The Virginia Community College System defines a personally developed person as one who strives for physical well-being and emotional maturity. TCC graduates will demonstrate the ability to develop and/or refine personal wellness goals and develop and/or enhance the knowledge, skills and understanding to make informed academic, social, personal, career, and interpersonal decisions.

PERSONAL DEVELOPMENT VALUE RUBRIC

for more information contact value@aacu.org

Explanation	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Personal Wellness Demonstrates an ability to interpret personal wellness information, make modification(s), develop personal wellness goal(s), and create a strategy for achieving personal wellness goal(s).	Student interprets personal wellness information in terms of one's own personal wellness and identifies the modification(s) needed to pursue personal wellness goals. Student describes making modification(s) for personal wellness and articulates a strategy for achieving personal wellness goal(s).	Student demonstrates ability to interpret personal wellness information in terms of one's own personal wellness and articulates one or more modification(s) that are needed to pursue personal wellness goal(s). Student describes personal wellness goal(s) and implements at least one modification, but does not identify a strategy for reaching personal wellness goal(s).	Student demonstrates an understanding of personal wellness information and begins to interpret personal wellness information in terms of one's own personal wellness. Student begins to articulate personal wellness goal(s) and at least one modification that may be needed for pursuing goal(s).	Student begins to demonstrate an understanding of components of personal wellness, but may be unable to interpret it in terms of one's own personal wellness. Student does not describe personal wellness goal(s).
Decision-Making Demonstrates logical, well-balanced ability to make social, personal, and interpersonal decisions.	Student describes social, personal, and interpersonal decision(s) that are logical and demonstrates balanced thinking of critical thinking and reflective thought. Student considers multiple options and consequences and gives thorough consideration for using the best option, given alternative option(s) and consequence(s).	Student describes social, personal, and interpersonal decision(s) that are not reactionary or emotional but demonstrates some balanced, logical thinking with critical thinking and reflective thought. Student considers more than one option and gives some consideration for consequence(s) of choice.	Student demonstrates social, personal, and interpersonal decision-making that is not entirely reactionary or emotional. Decisions are given some critical thinking and/or reflective thought. Student gives little or no consideration for consequence(s).	Student describes social, personal, and interpersonal decisions that are reactive to situations or entirely emotional and are decided upon without critical thinking and/or reflective thought.
Academic and Professional Goal-Setting Describes personal, academic, and/or professional goal(s) and has developed a plan for achieving goal(s).	Student describes thoughtful, comprehensive personal, academic, and/or professional goal(s) that has a corresponding reasonable, thorough plan for achieving the goal(s).	Student describes personal, academic, or professional goal(s) with depth. Plan for achieving goal(s) is clearly described but may be inconsistent, unreasonable, or incomplete.	Student describes personal, academic, or professional goal(s), but goal(s) may lack clarity and/or complexity. Plan to achieve goal(s) is established.	Student describes consideration for personal, academic, and/or professional goal(s). No demonstrated plan for achieving goal(s) present.
Social and Interpersonal Development Demonstrates the ability to appreciate and empathize with the needs, values, and perspectives of others in relation to self.	Student describes the complexity, and validity of the needs, values, and perspectives of others in relation to self. Student demonstrates deeper appreciation and empathy for others' needs, values, and perspectives in relation to self. Student respects the opinions of others, even when they differ.	Student demonstrates an understanding of the complexity of others' needs, values, and perspectives. Student describes validity of others' needs, values, and perspectives with some relation to self. Student expresses some appreciation and empathy for others' needs, values, and perspectives in relation self. Student gives consideration to the differing opinions of others.	Student describes the needs, values, and perspectives of others with some consideration for the complexity of them. Student shows some understanding of validity of others' needs, and values, and perspectives. Student shows little to no appreciation or empathy for these needs, values, and perspectives of others in relation to self. Student begins to demonstrate acceptance of differing opinions of others.	Student is able to express the needs, values, and perspectives of others but demonstrates little to no understanding of the complexity or validity of them. Student shows little to no understanding of others' needs, values, and perspectives in relation to self. Student may respond negatively or critically to differing opinions of others.
Personal Identity Describes one's self in terms of personal identity, aspects and intersections, and as a part of a larger community.	Student demonstrates understanding of self with multiple personal identity intersections and the complexities of one's self with connections to personal identity and aspects, as well as to larger communities.	Student demonstrates understanding of self in two or more intersections of personal identity and demonstrates complex understanding of the connection of self to a larger community in more that one aspect of personal identity.	Student begins to describe personal identity and its aspects, as well intersections of at least two aspects of personal identity. Student demonstrates some understanding of how self is connected to a larger community in at least one aspect of personal identity.	Student expresses an understanding of self with limited understanding of personal identity and its aspects, and shows little to no understanding of the intersections of personal identity or the connection of self to a larger community.

Appendix D: Courses Selected for Assessment

Courses Selected for Assessment by Learning Outcome and Cycle

Written Communication

Fall 2012 (Pilot)

BIO 142 Human Anatomy and Physiology II

ENG 241 Survey of American Literature I

HIS 122 United States History II

DMS 212 Obstetrical and Gynecological Sonography

PSY 235 Child Psychology

Fall 2014

ACQ 221 Advanced Acquisition and Procurement Management I (Not assessed: not offered fall 2014) MKT 170 Customer Service

NAS 131 Astronomy I

OCT 100 Introduction to Occupational Therapy

RAD 142 Principles of Radiographic Quality II

REL 230 Religions of the World

Fall 2017

STUDENT LEARNING

CST 110 Introduction to Communication

CST 141 Theater Appreciation I

CST 151 Film Appreciation I

ENG 111 College Composition I

ENG 112 College Composition II

ENG 125 Introduction to Literature

ENG 211 Creative Writing I

ENG 251 Survey of World Literature I

ENG 253 Survey of African-American Literature I

GEO 220 World Regional Geography (Not assessed: no SWPs submitted)

HIS 101 History of Western Civilization I

HIS 102 History of Western Civilization II

HIS 111 History of World Civilization I

HIS 112 History of World Civilization II (Not assessed: no SWPs submitted)

HIS 121 United States History I

HIS 122 United States History II

HUM 201 Survey of Western Culture I

HUM 202 Survey of Western Culture II

HUM 256 Mythology in Literature and the Arts

HUM 259 Greek Mythology

NAS 125 Meteorology

NAS 130 Elements of Astronomy

PHI 101Introduction to Philosophy I

PHI 102 Introduction to Philosophy II

PHI 220 Ethics

PHI 226 Social Ethics

PLS 130 Basics of American Politics

PLS 211 U.S. Government I

REL 210 Survey of the New Testament

REL 230 Religions of the World

ASSIGNMENT DESIGN

AST 141 Word Processing (Microsoft Office Word)

AUT 155 Basic Automotive Engine Performance Diagnostics

BUS 260 Planning for Small Business

CRF 130 Glass Blowing I

EGR 262 Fundamental Circuits Laboratory

ESL 31 Composition I

HLT 215 Personal Stress and Stress Management

HMS 258 Case Management and Substance Abuse

IND 150 Industrial Management

MAR 120 Introduction to Ship Systems

Information Literacy

Fall 2012 (Pilot)

ART 286 Communication Arts Workshop

ART 287 Portfolio and Resume Preparation

BIO 142 Human Anatomy and Physiology II

ECO 201 Principles of Macroeconomics

ENG 241 Survey of American Literature I

HIS 122 United States History II

NUR 255 Nursing Organization and Management

Fall 2014

IDS 245 Computer-Aided Drafting for Interior Designers

ITE 119 Information Literacy

MDL 225 Clinical Hematology II

MKT 100 Principles of Marketing

SOC 201 Introduction to Sociology I

Critical Thinking

Spring 2013 (Pilot)

ENG 210 Advanced Composition

GOL 112 Oceanography II

HIS 112 History of World Civilization II

ITN 260 Network Security Basics

Spring 2014

ADJ 201 Criminology

DMS 207 Sectional Anatomy

EMS 111 Emergency Medical Technician - Basic

ENG 112 College Composition II

HIM 230 Information Systems and Technology in Health Care

HIS 142 African American History II

RTH 290 Coordinated Internship in Respiratory Therapy

Fall 2016

STUDENT LEARNING

ART 101 History and Appreciation of Art I

ART 102 History and Appreciation of Art II (Not assessed: no SWPs submitted)

ART 201 History of Art I

BIO 102 General Biology II

BIO 141 Human Anatomy and Physiology I

BIO 142 Human Anatomy and Physiology II

CST 100 Principles of Public Speaking

CST 110 Introduction to Communication

CST 141 Theater Appreciation

ECO 120 Survey of Economics

ECO 201 Principles of Macroeconomics

ECO 202 Principles of Microeconomics

ENG 111 College Composition I

ENG 112 College Composition II

ENG 125 Introduction to Literature

ENG 211 Creative Writing I

ENG 241 Survey of American Literature I

ENG 251 Survey of World Literature I

GEO 220 World Regional Geography (Not assessed: no SWPs submitted)

HIS 101 History of Western Civilization I

HIS 102 History of Western Civilization II

HIS 111 History of World Civilization I

HIS 112 History of World Civilization II

HIS 121 United States History I

HIS 122 United States History II

HUM 201 Survey of Western Culture I

HUM 256 Mythology in Literature and the Arts

HUM 259 Greek Mythology

HUM 260 Survey of Twentieth-Century Culture

MUS 121 Music Appreciation I

NAS 125 Meteorology

NAS 130 Elements of Astronomy

PHI 101 Introduction to Philosophy

PHI 111 Logic I

PHI 220 Ethics

PHI 226 Social Ethics

PLS 130 Basics of American Politics

PLS 211 U.S. Government I

SSC 210 Introduction to Women's Studies

ASSIGNMENT DESIGN

BUS 100 Introduction to Business

BUS 216Probability and Statistics for Business and Economics

BUS 220 Introduction to Business Statistics

CAD 140 Technical Drawing

CIV 259 Virginia Coordinate Systems (Not assessed: no assignment instructions submitted)

EGR 110 Engineering Graphics

ELE 229 Troubleshooting and Maintenance of Electrical Systems

ETR 148 Amplifiers and Integrated Circuits

HLT 261 Basic Pharmacy I (Not assessed: no assignment instructions submitted)

LGL 225 Estate Planning and Probate

Quantitative Reasoning

Spring 2013 (Pilot)

ACC 212 Principles of Accounting II

CHM 112 College Chemistry II

EGR 245 Engineering Mechanics - Dynamics

MTH 157 Elementary Statistics

MTH 270 Applied Calculus

RAD 205 Radiation Protection and Radiobiology

Spring 2015

AUT 169 Automotive Diagnostics IV

BUS 280 Introduction to International Business

CAD 202 Computer-Aided Drafting and Design II

CSC 215 Advanced Computer Organization (Not assessed: no SWPs submitted)

FIN 215 Financial Management

MTH 164 Precalculus II

PHY 100 Elements of Physics

Scientific Reasoning

Spring 2013 (Pilot)

ADJ 234 Terrorism and Counter-Terrorism

ARC 133 Construction Methodology and Procedures I

BIO 102 General Biology II

EMS 211 Operations

PSY 255 Psychological Aspects of Criminal Behavior

Spring 2015

BIO 150 Introductory Microbiology

CHM 241 Organic Chemistry I

EGR 140 Engineering Mechanics – Statics

MEC 132 Mechanics II – Strength of Materials for EGR Tech

PSY 232 Life Span Human Development II

PTH 122 Therapeutic Procedures II

Spring 2017

STUDENT LEARNING

BIO 101 General Biology I

BIO 102 General Biology II

BIO 142 General Anatomy and Physiology II

CHM 111 College Chemistry I

CHM 112 College Chemistry II

GEO 210 People and the Land: Introduction to Cultural Geography

GOL 105 Physical Geology

GOL 106 Historical Geology

GOL 110 Earth Science

GOL 111 Oceanography I

GOL 112 Oceanography II

NAS 131 Astronomy I

NAS 132 Astronomy II

PHY 201 General College Physics I (Not assessed: no SWPs submitted)

PHY 202 General College Physics II

PHY 241 University Physics I

PHY 242 University Physics II

PSY 200 Principles of Psychology

PSY 201 Introduction to Psychology I

PSY 202 Introduction to Psychology II

ASSIGNMENT DESIGN

ARC 133 Construction Methodology and Procedures I (Not assessed: competency incorrectly identified on Course Outline)

CIV 230 Civil Constructions Materials

DMS 208 Ultrasound Physics and Instrumentation I (Not assessed: assignment instructions received after deadline)

EMS 255 Concepts in Critical Care

FNS 121 Anatomy for Funeral Service

IND 137 Team Concepts and Problem Solving

ITN 260 Network Security Basics (Not assessed: competency incorrectly identified on Course Outline)

LGL 216 Trial Preparation and Discovery Practice (Not assessed: no assignment instructions submitted)

NAS 2 Foundations of Life Science

NUR 130 Physical Assessment and Basic Pharmacology

Oral Communication

Fall 2013 (Pilot)

CST 100 Principles of Public Speaking

Fall 2015

STUDENT LEARNING

CST 100 Principles of Public Speaking

CST 141 Theater Appreciation I

PLS 130 Basics of American Politics

PLS 211 U.S. Government I

ASSIGNMENT DESIGN

AST 205 Business Communications

BUS 100 Introduction to Business (Not assessed: no assignment instructions submitted)

CHD 146 Math, Science, and Social Studies for Children

ESL 33 Oral Communication I

FRE 101 Beginning French I

ITD 210 Web Page Design II

NUR 201 Psychiatric Nursing

SPA 101 Beginning Spanish I

SPA 201 Beginning Spanish II

WEL 124 Shielded Metal Arc Welding (Advanced) (Not assessed: no assignment instructions submitted)

Cultural and Social Understanding

Fall 2013 (Pilot)

EMS 201 EMS Professional Development

GEO 210 People and the Land: Introduction to Cultural Geography

HUM 260 Survey of Twentieth-Century Culture

PHI 226 Social Ethics

PTH 210 Psychological Aspects of Therapy

SSC 210 Introduction to Women's Studies

Fall 2015

STUDENT LEARNING

ART 201 History of Art I

ENG 125 Introduction to Literature

ENG 241 Survey of American Literature I

HIS 101 History of Western Civilization I

HIS 111 History of World Civilization I

HIS 112 History of World Civilization II

HIS 121 United States History I

HIS 122 United State History II

MUS 121 Music Appreciation I

MUS 122 Music Appreciation II

PSY 215 Abnormal Psychology

PSY 230 Developmental Psychology

REL 210 Survey of the New Testament (Not assessed: no SWPs submitted)

REL 230 Religions of the World

SOC 201 Introduction to Sociology I

SOC 202 Introduction to Sociology II

SSC 210 Introduction to Women's Studies

ASSIGNMENT DESIGN

HIS 155 Life in Colonial Virginia

HLT 110 Concepts of Personal and Community Health

HMS 100 Introduction to Human Services (Not assessed: no assignment instructions submitted)

HMS 258 Case Management and Substance Abuse (Not assessed: no assignment instructions submitted)

PBS 265 Interviewing

PED 171 Ballroom Dance I

PSY 255 Psychological Aspects of Criminal Behavior

PTH 151 Musculoskeletal Structure and Function

PTH 226 Therapeutic Exercise

SDV 101 Orientation to Health Care

Personal Development

Spring 2014 (Pilot)

CST 126 Interpersonal Communication

HLT 116 Introduction to Personal Wellness Concepts

HTL 215 Personal Stress and Stress Management

SDV 100 College Success Skills

SDV 108 College Survival Skills

Spring 2016

STUDENT LEARNING

HUM 246 Creative Thinking

PSY 200 Principles of Psychology

PSY 201 Introduction to Psychology I

PSY 202 Introduction to Psychology II

PSY 216 Social Psychology

ASSIGNMENT DESIGN

AST 271 Medical Office Procedures

CRF 130 Glass Blowing I

HLT 143 Medical Terminology

HLT 200 Human Sexuality

MUS 163 Guitar Theory and Practice

OCT 206 Dyadic and Group Dynamics

PED 109 Yoga

PSY 105 Psychology of Personal Adjustment

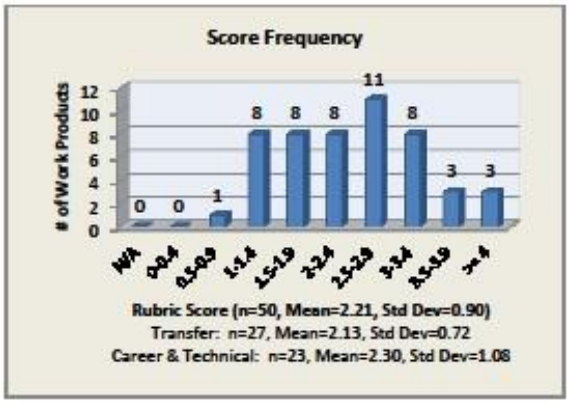
SDV 108 College Survival Skills

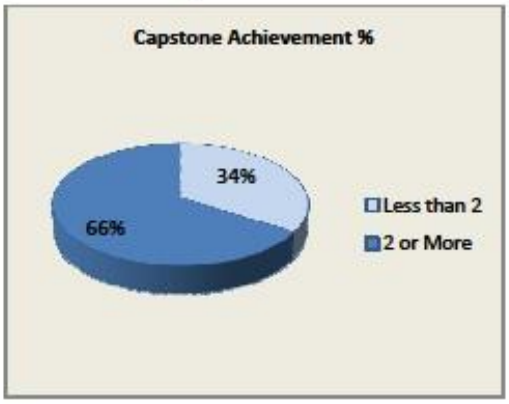
WEL 170 Maritime Shielded Metal Arc Fillet Welding (SMAW I)

Appendix E: Student Learning Data Analyses

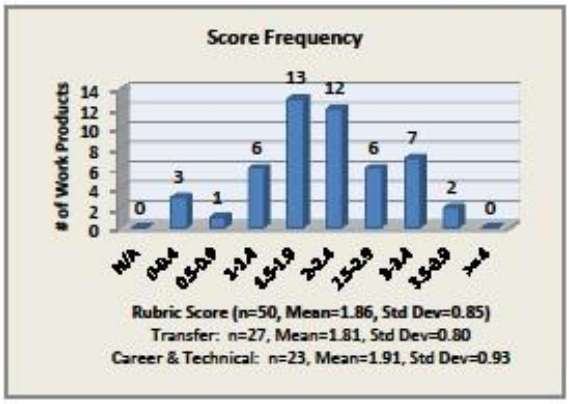
Written Communication Fall 2012 Assessment Results

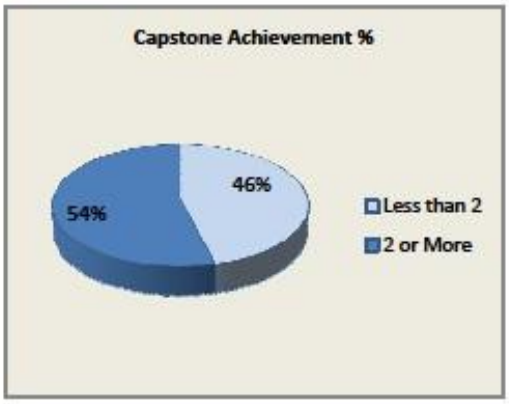
Context of and Purpose for Writing



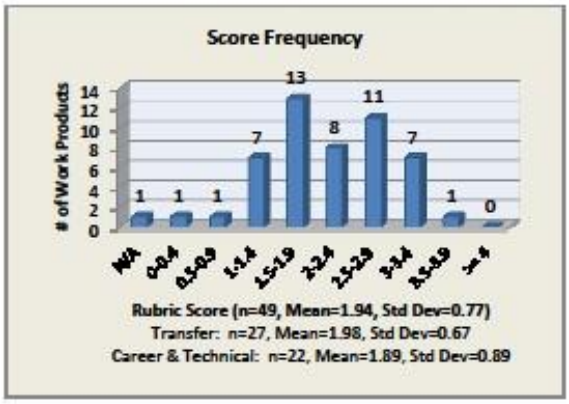


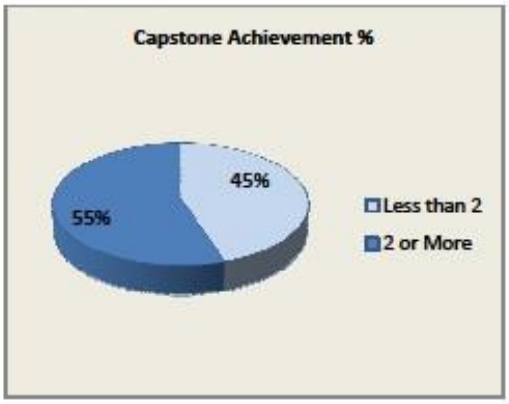
Content Development





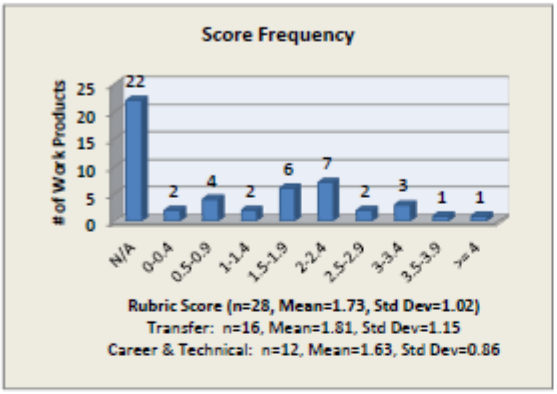
Genre and Disciplinary Conventions

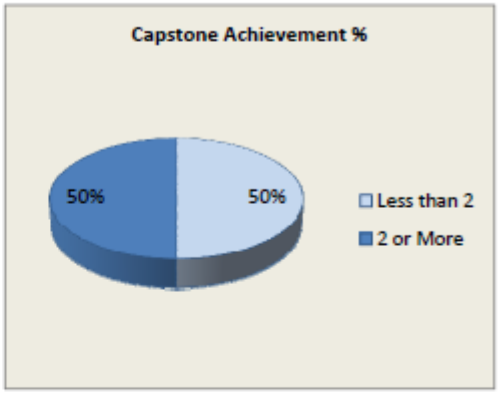




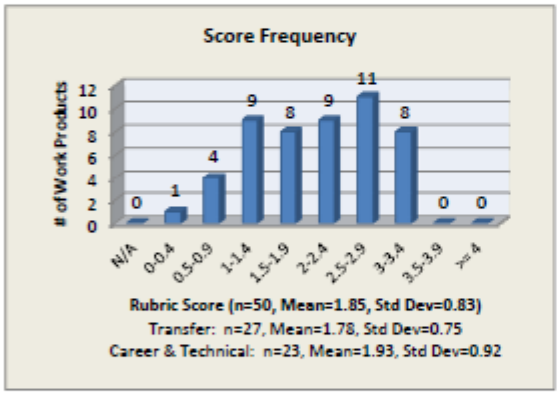
Written Communication Fall 2012 Assessment Results

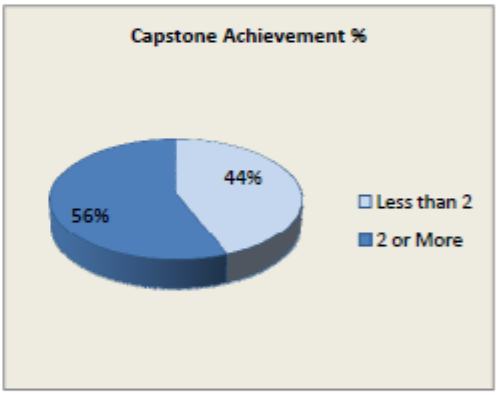
Sources and Evidence





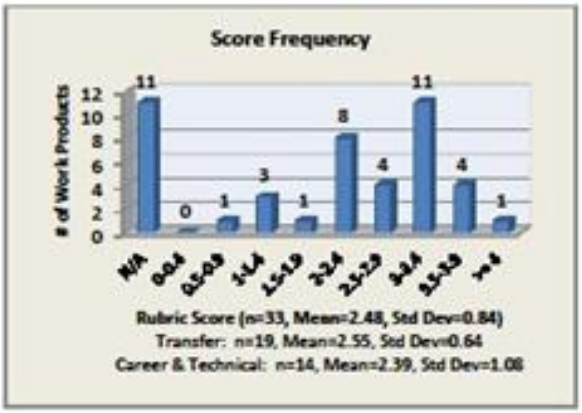
Control of Syntax and Mechanics

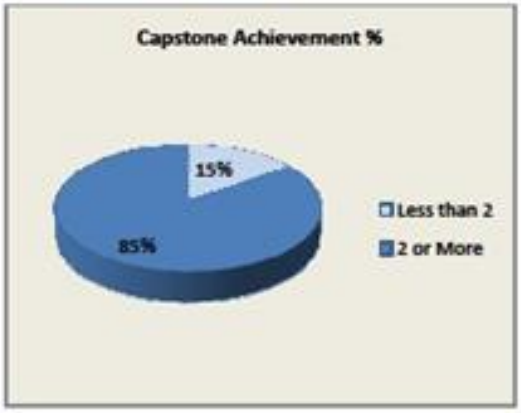




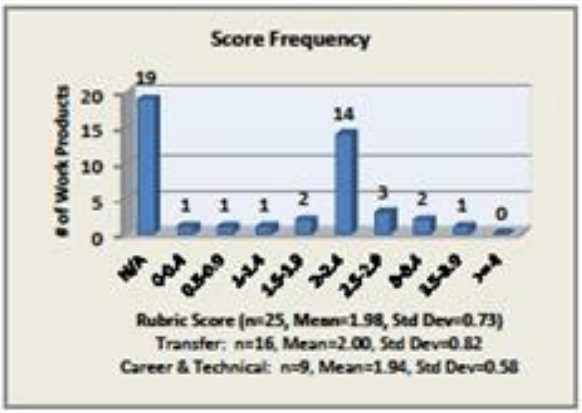
Information Literacy Fall 2012 Assessment Results

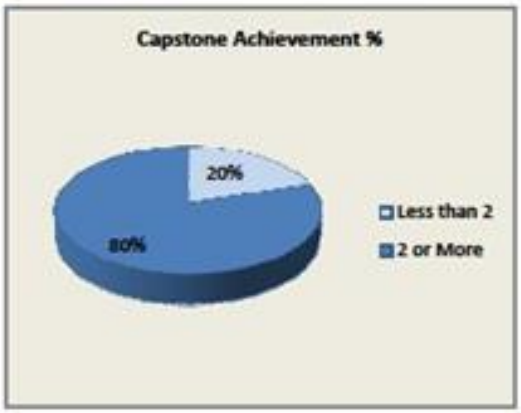
Determine the Extent of Information Needed



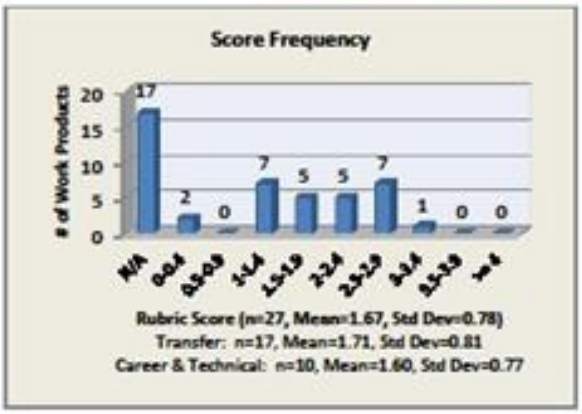


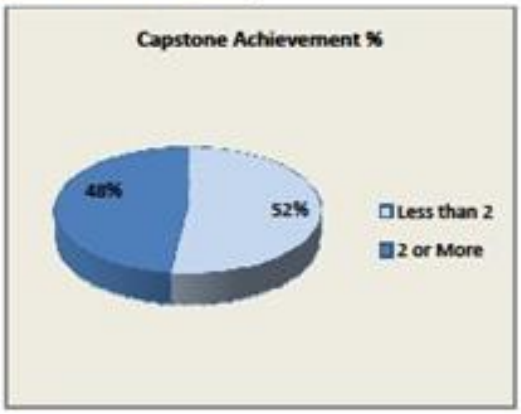
Access the Needed Information





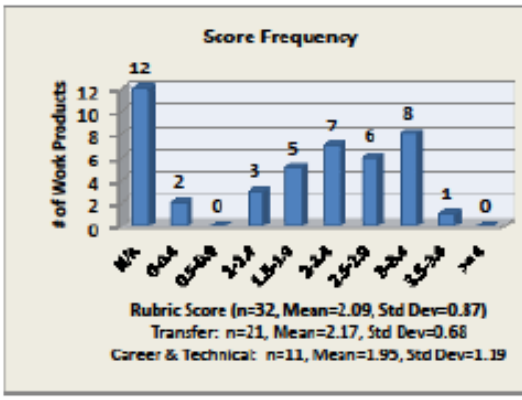
Evaluate Information and Sources Critically

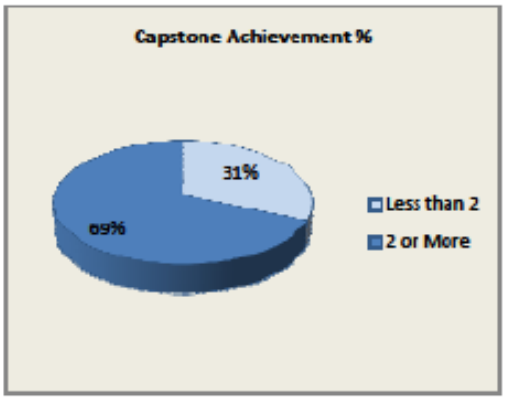




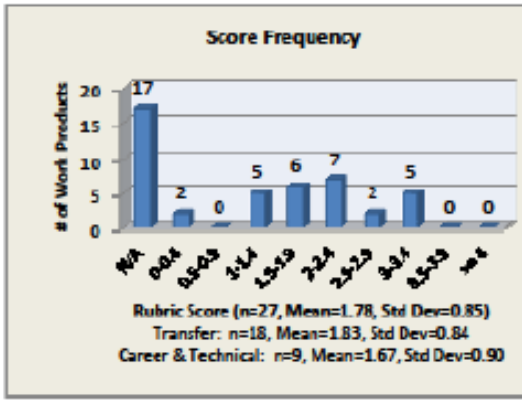
Information Literacy Fall 2012 Assessment Results

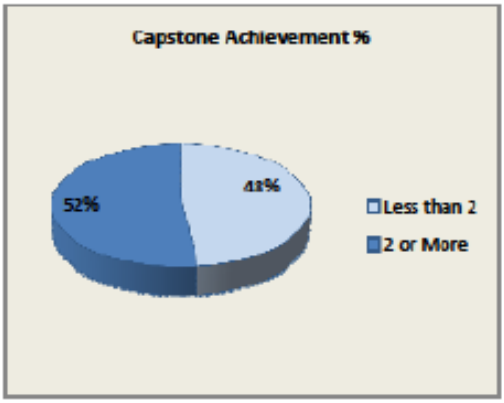
Use Information Effectively to Accomplish a Specific Purpose





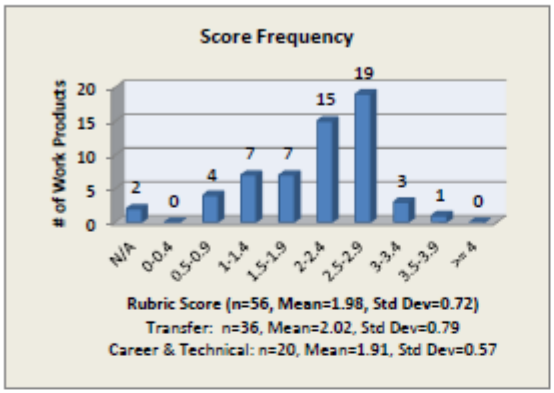
Access and Use Information Ethically and Legally

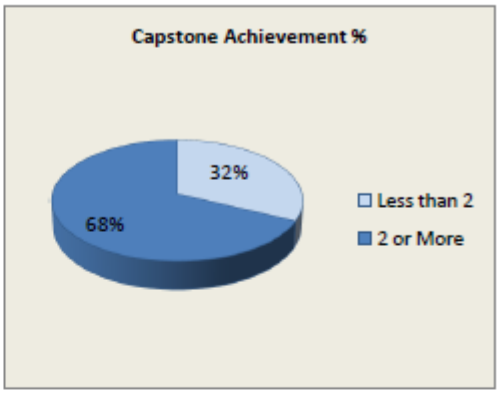




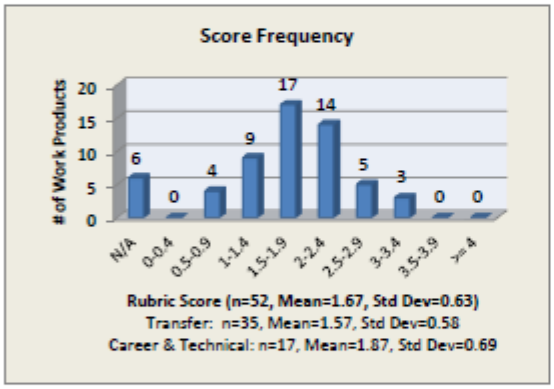
Critical Thinking Spring 2013 Assessment Results

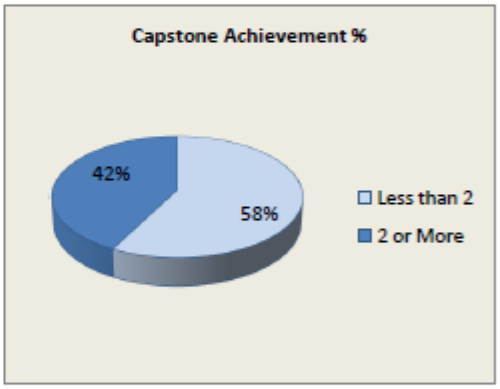
Explanation of Issues



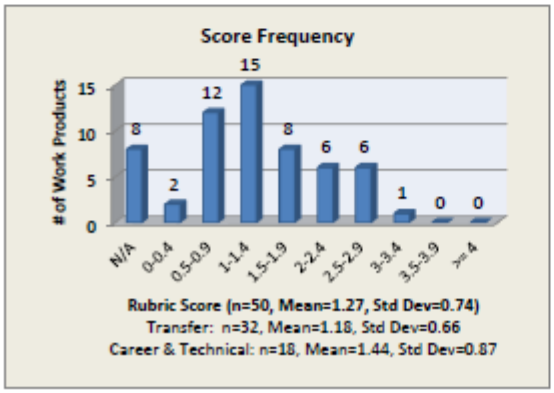


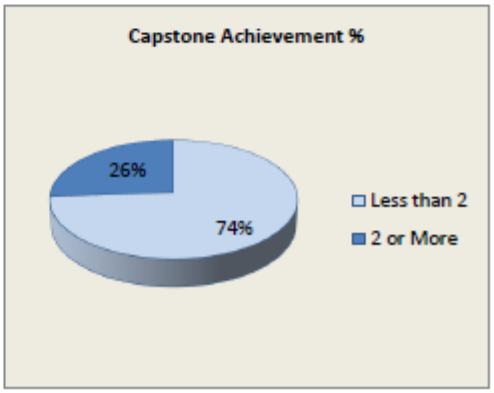
Evidence





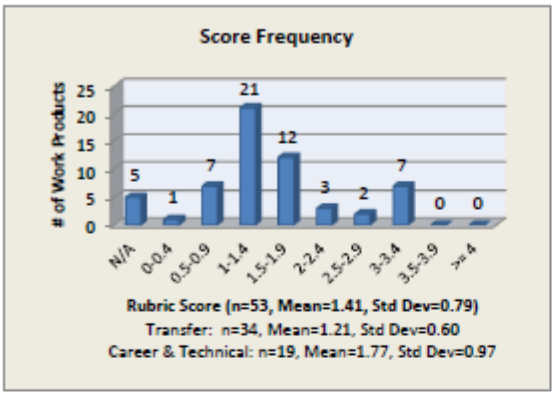
Influence of Context and Assumptions

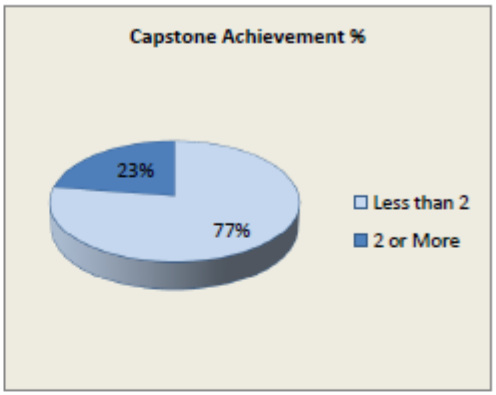




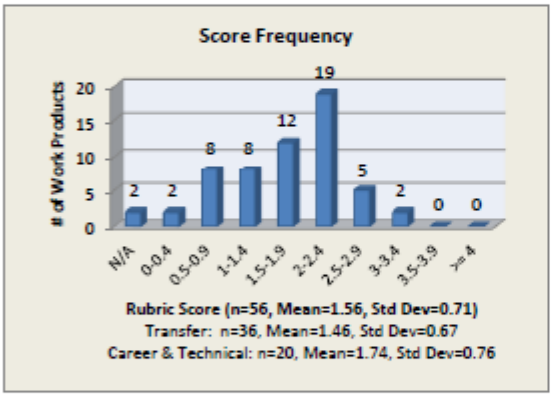
Critical Thinking Spring 2013 Assessment Results

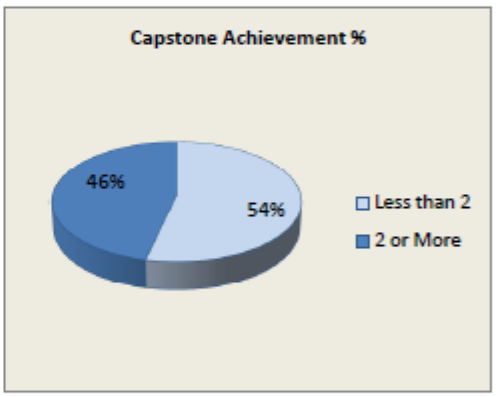
Student's Position - Perspective, Thesis/Hypothesis



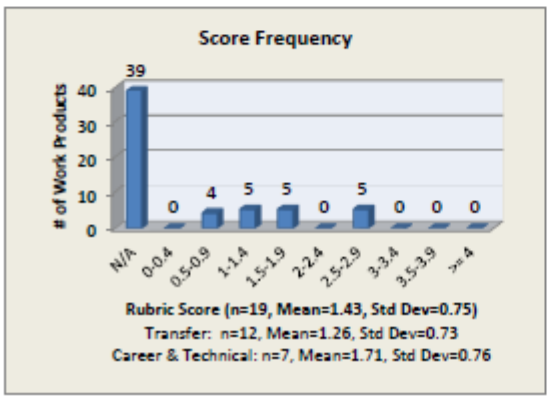


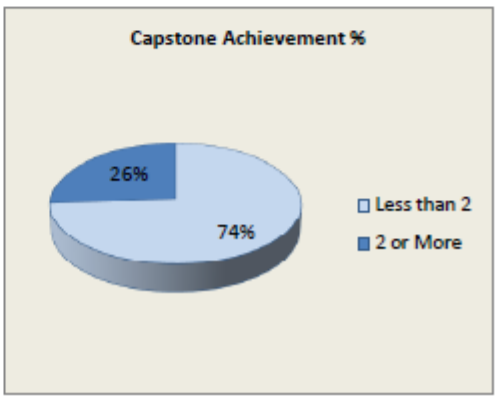
Conclusions and Related Outcomes





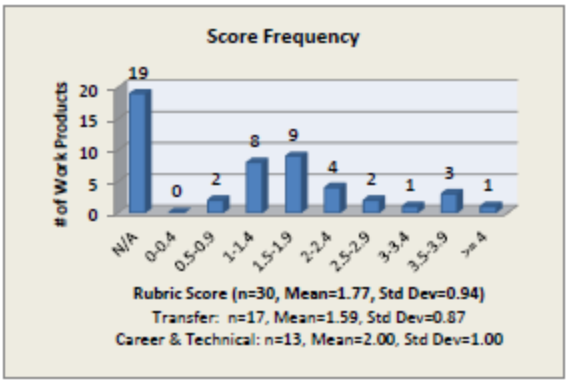
Solving Problems

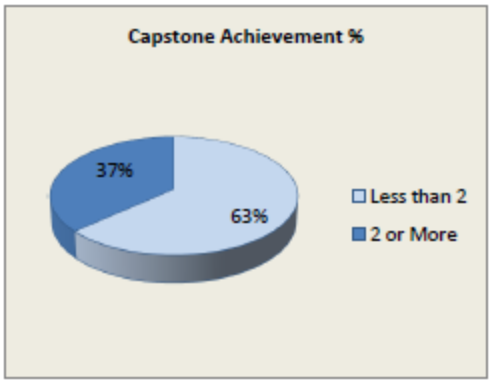




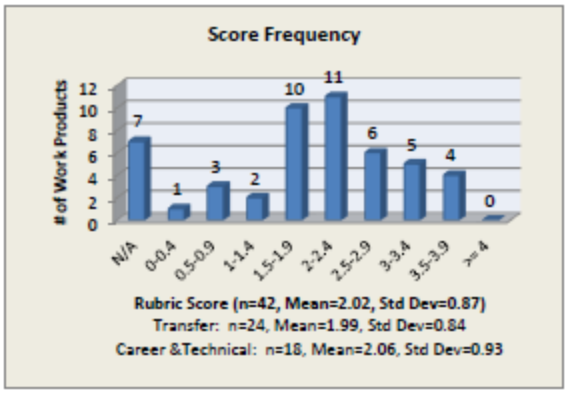
Quantitative Reasoning Spring 2013 Assessment Results

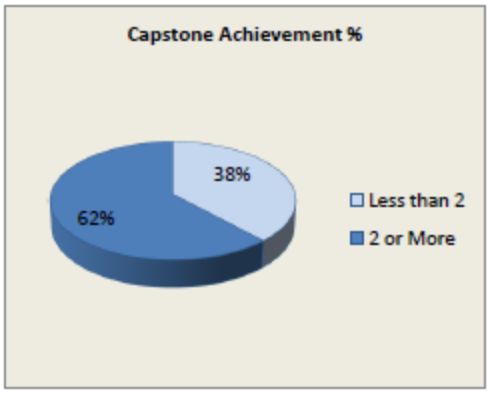
Interpretation



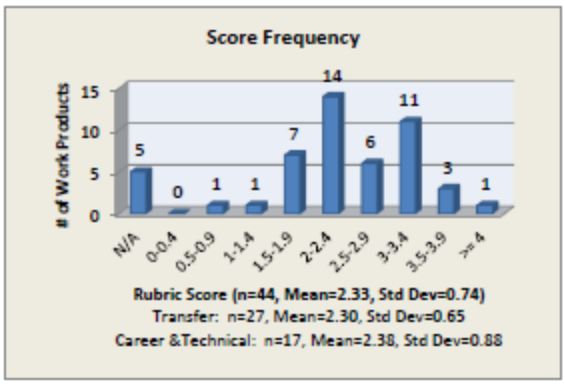


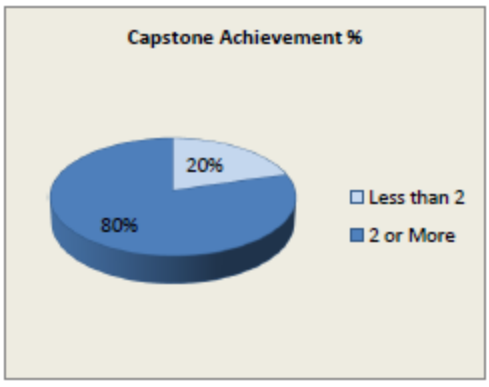
Representation





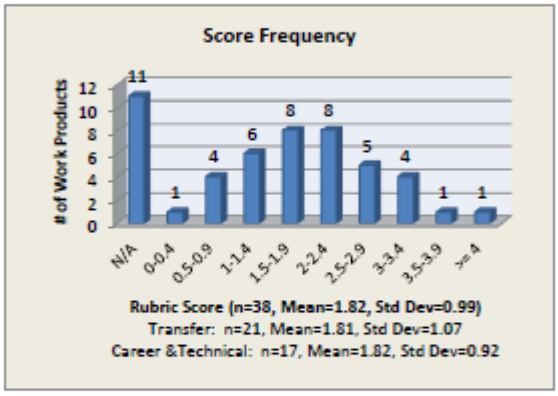
Calculation

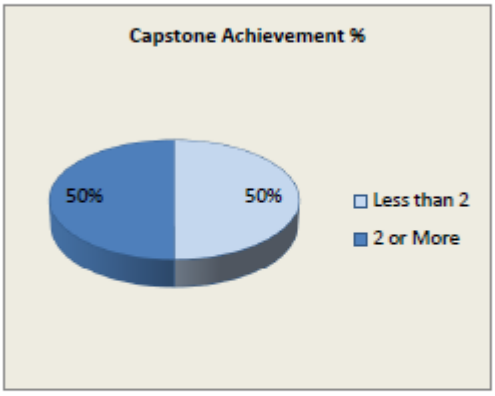




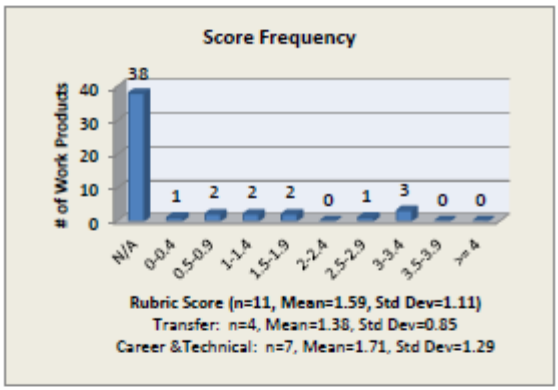
Quantitative Reasoning Spring 2013 Assessment Results

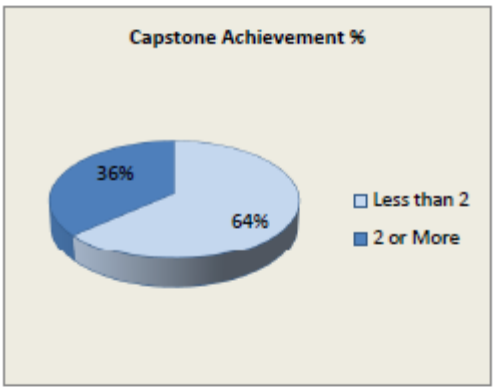
Application/Analysis



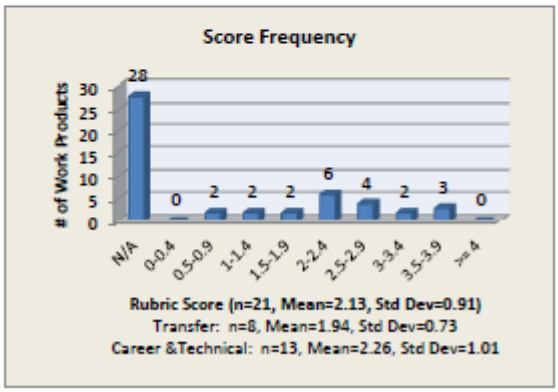


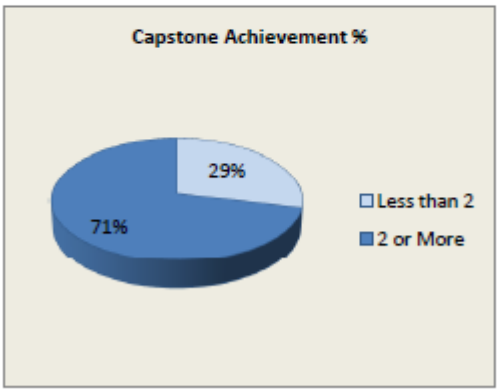
Assumptions





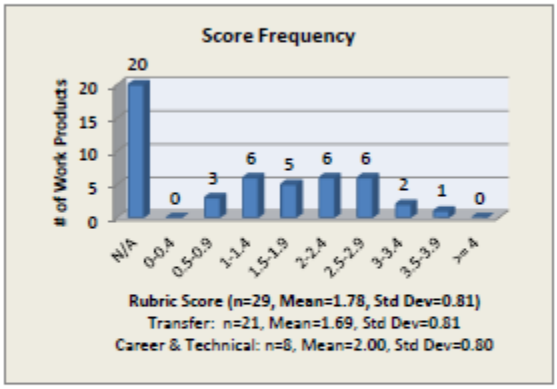
Communication

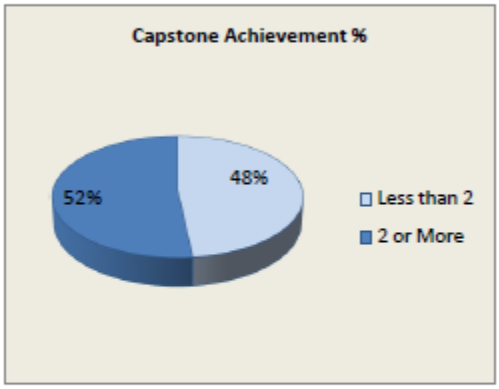




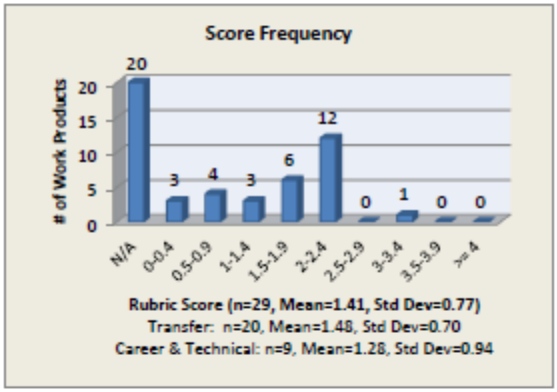
Scientific Reasoning Spring 2013 Assessment Results

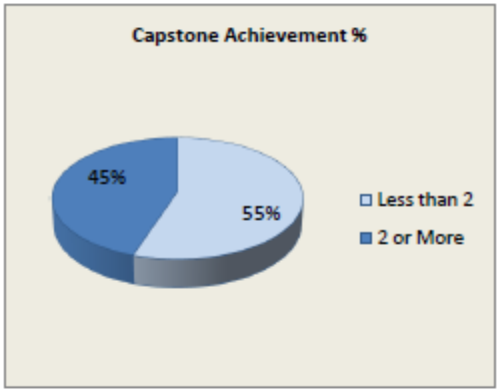
Argument or Topic Selection



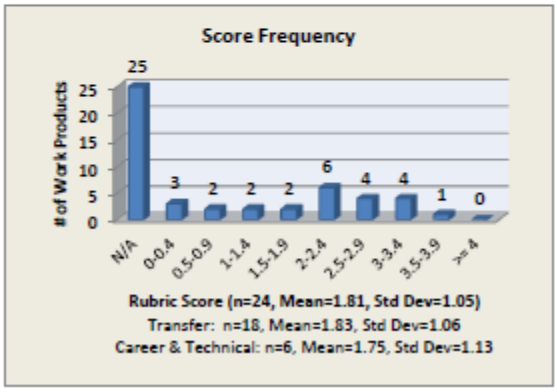


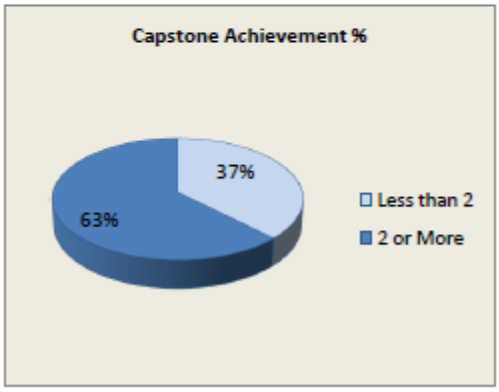
Existing Knowledge, Research and/or Views





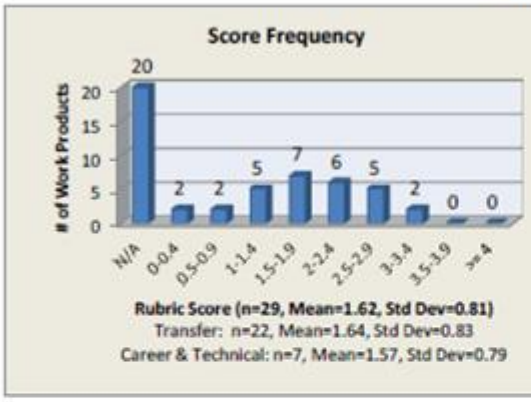
Methodology

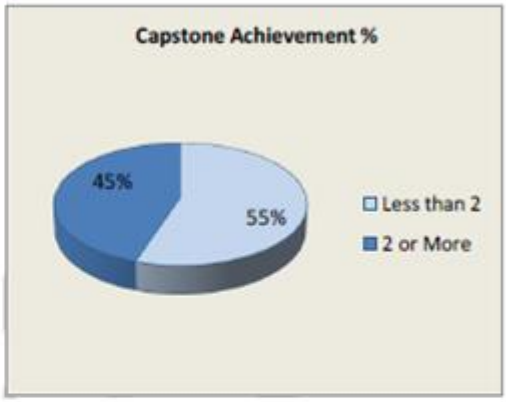




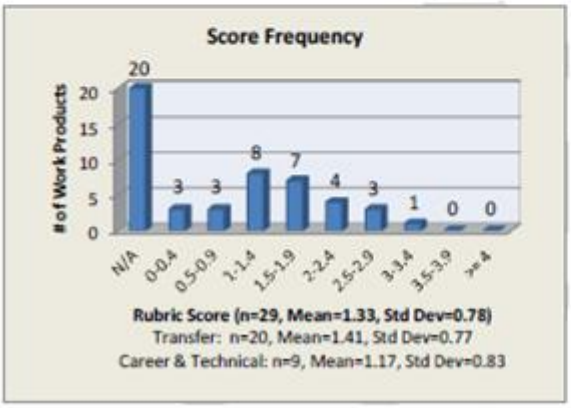
Scientific Reasoning Spring 2013 Assessment Results

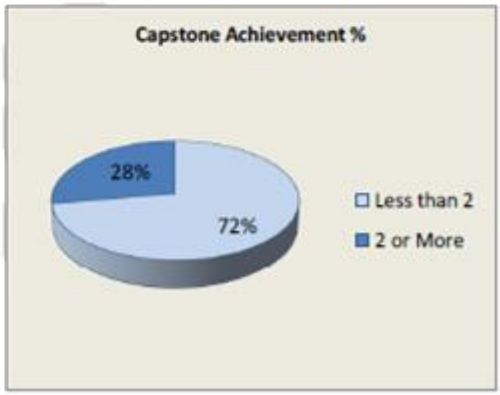
Analysis





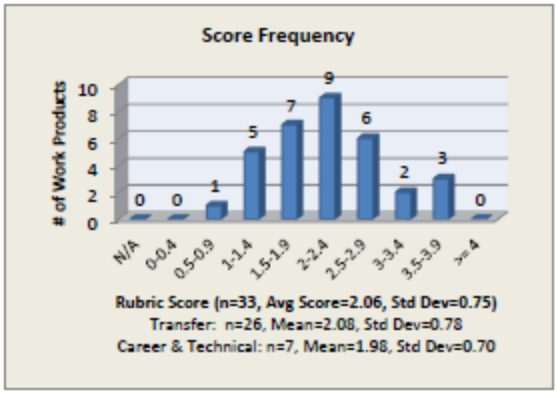
Conclusions, Limitations and Implications

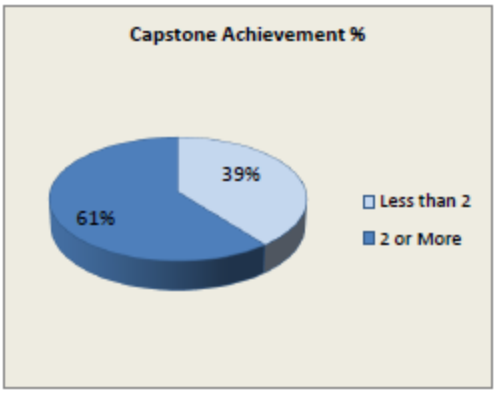




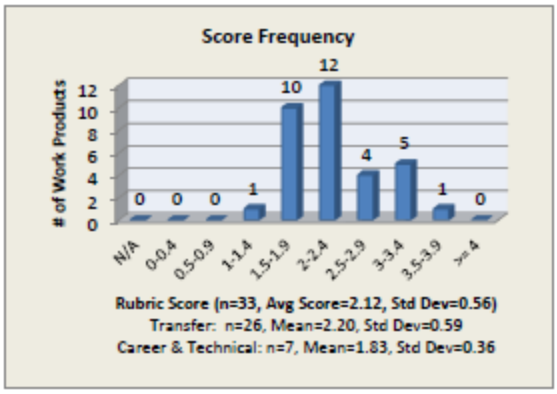
Oral Communication Summer 2013 Assessment Results

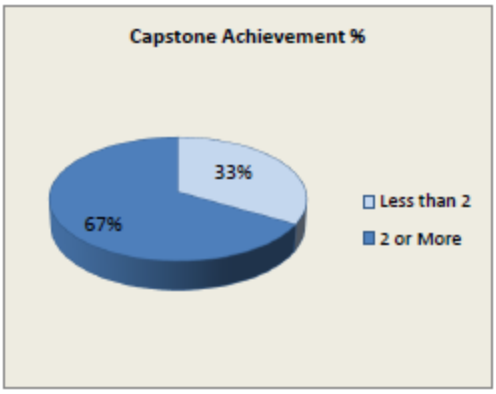
Organization



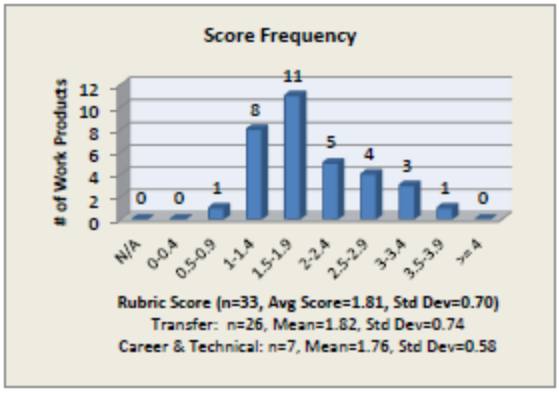


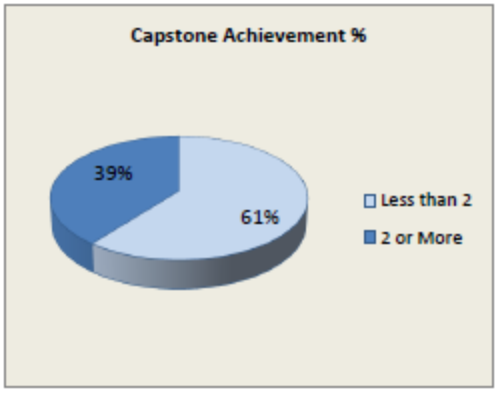
Language





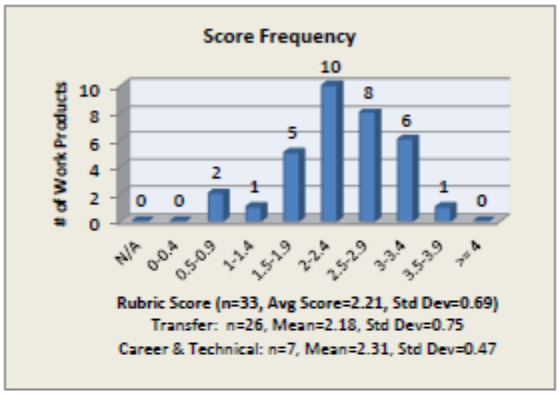
Delivery

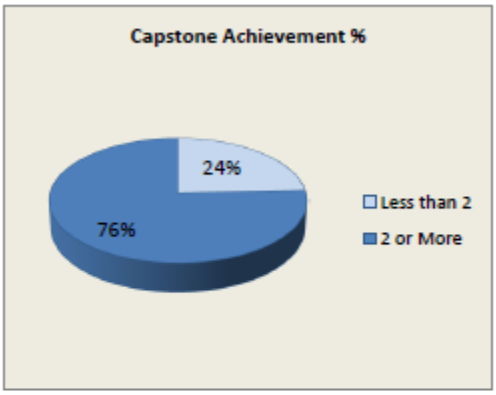




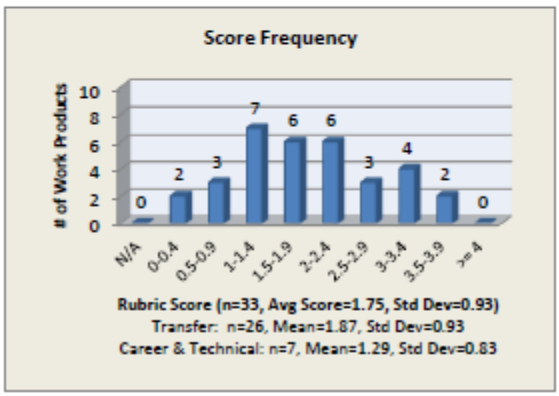
Oral Communication Summer 2013 Assessment Results

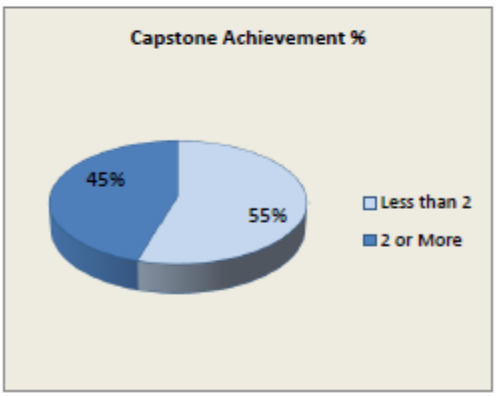
Central Message





Supporting Material

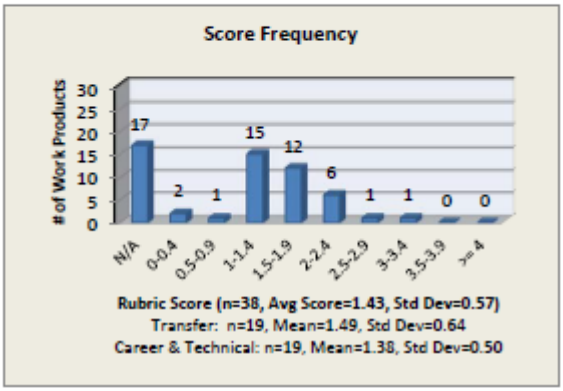


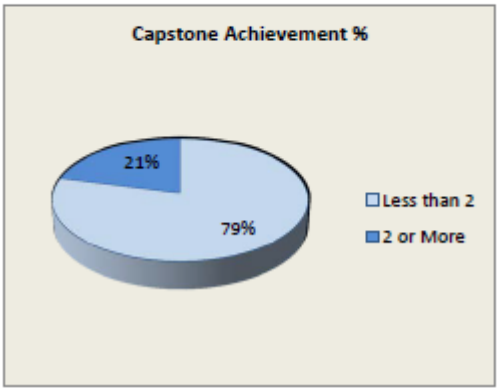


Cultural and Social Understanding Fall 2013 Assessment Results

Knowledge

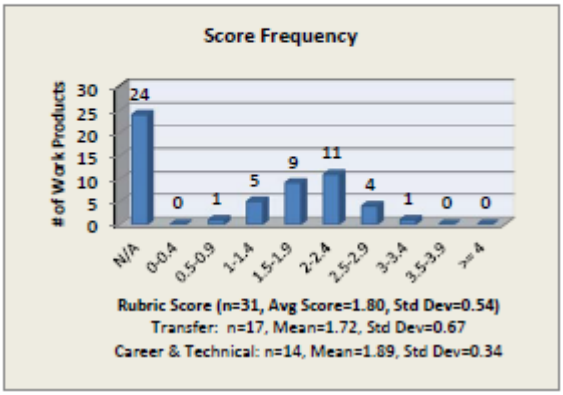
(Assess the impact that institutions have on individuals and culture)

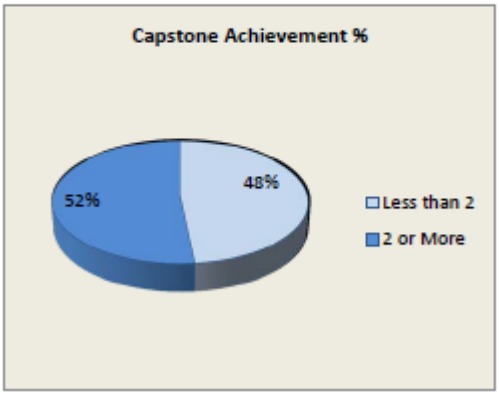




Knowledge

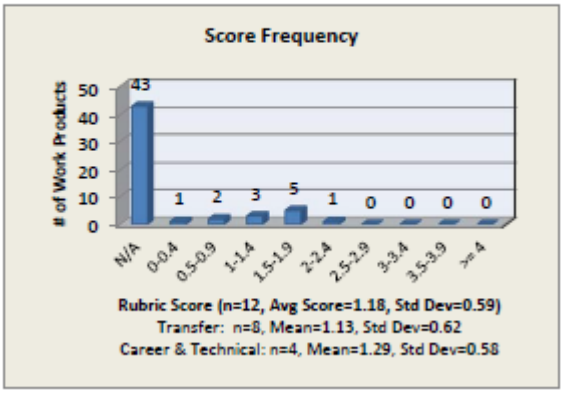
(Describes their own as well as others' personal ethical systems and values)

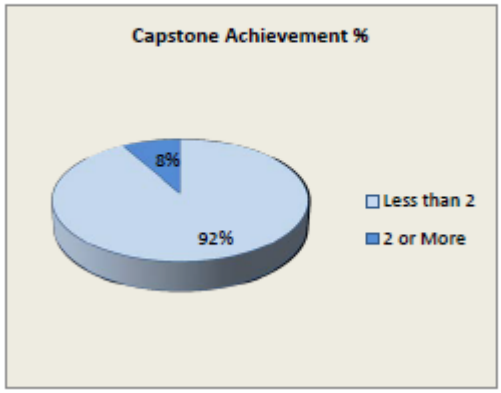




Skills

(Recognize the impact that arts and humanities have upon individuals and cultures)

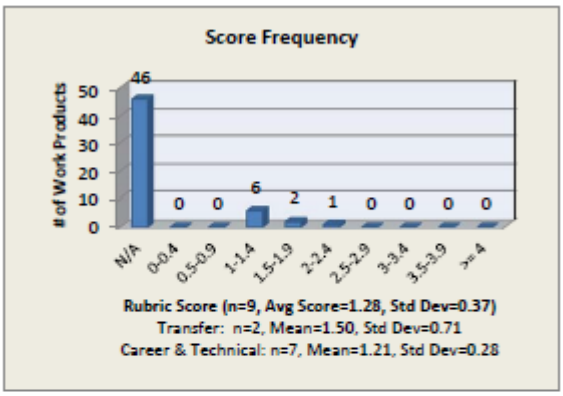


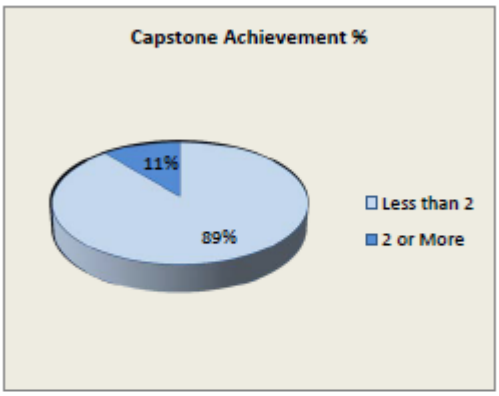


Cultural and Social Understanding Fall 2013 Assessment Results

Skills

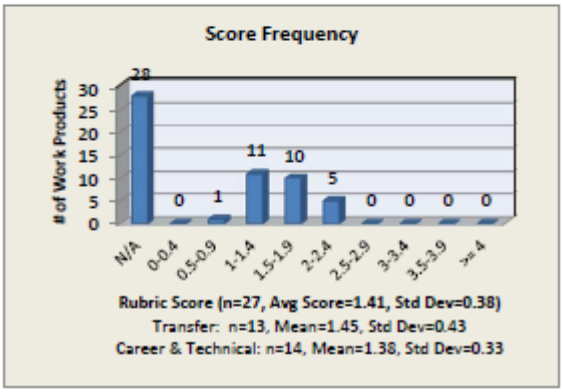
(Recognize the role of language in social and cultural contexts)

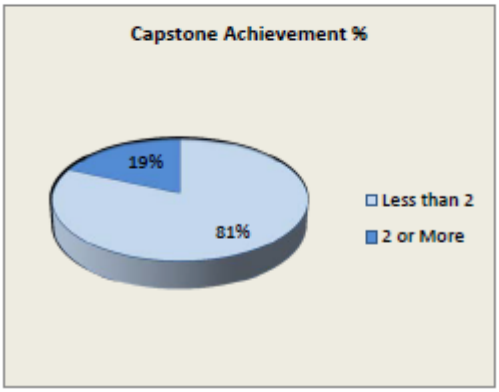




Skills

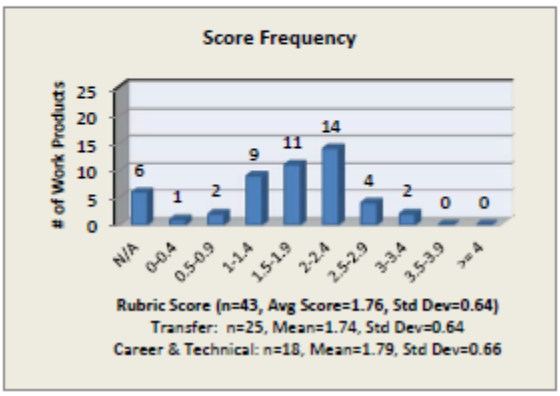
(Recognize interdependence of world-wide social, economic, geo-political, and cultural systems)

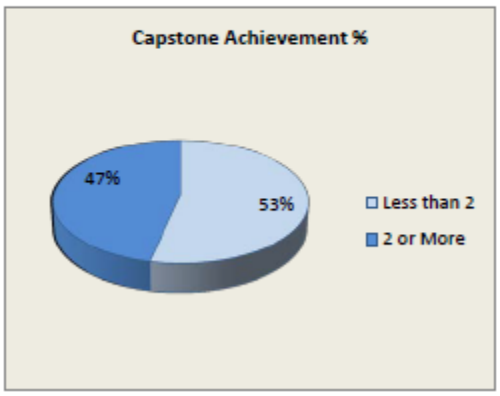




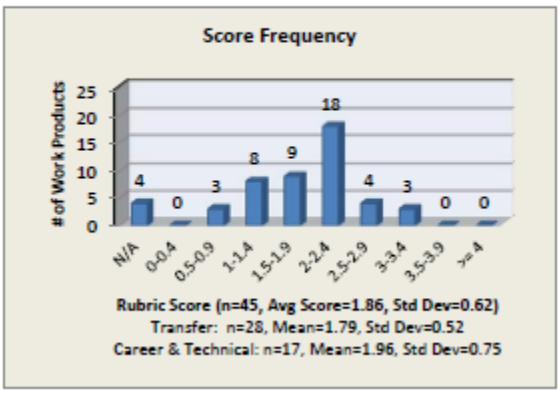
Personal Development Spring 2014 Assessment Results

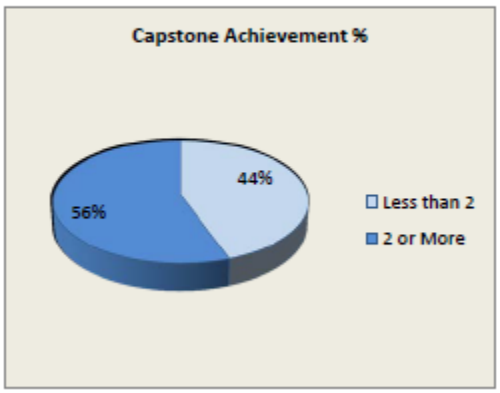
Personal Wellness



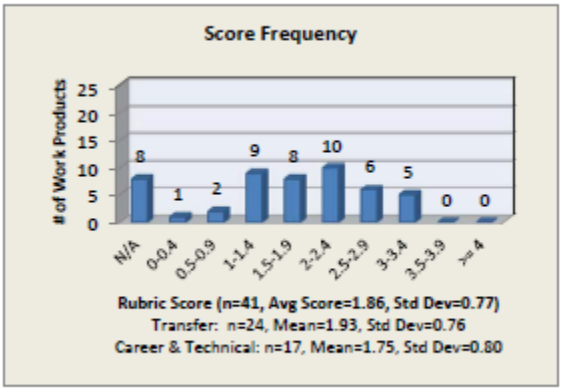


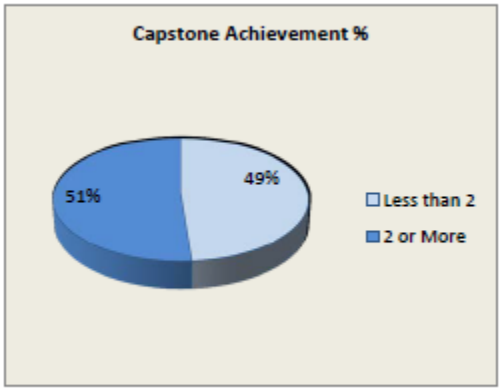
Decision-Making





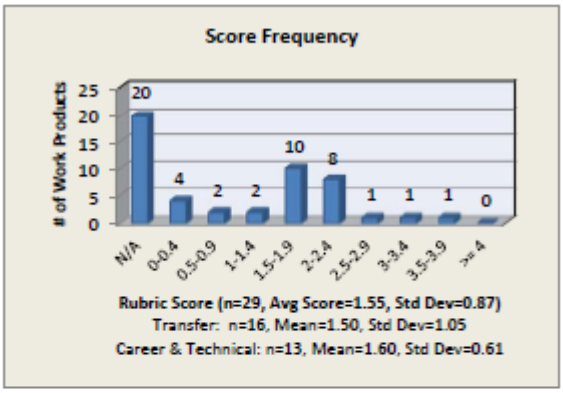
Academic and Professional Goal-Setting

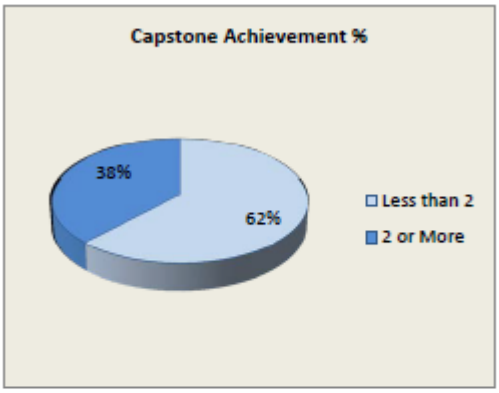




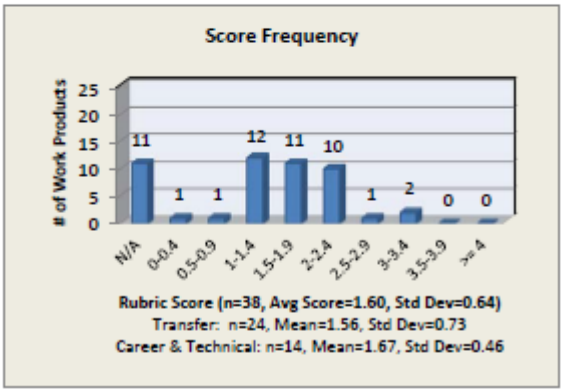
Personal Development Spring 2014 Assessment Results

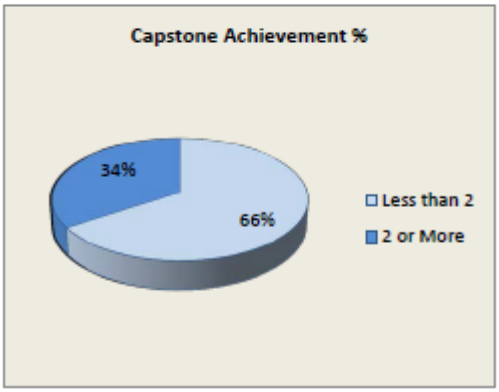
Social and Interpersonal Development





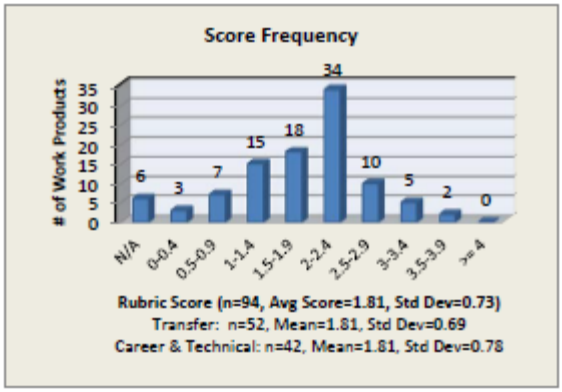
Personal Identity

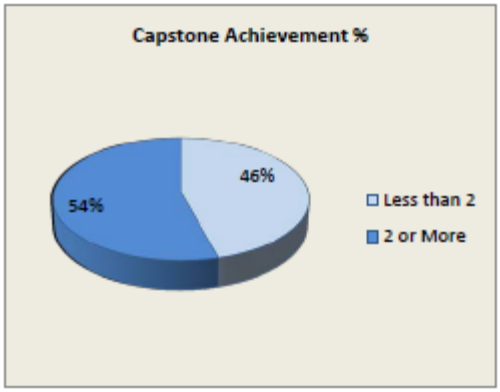




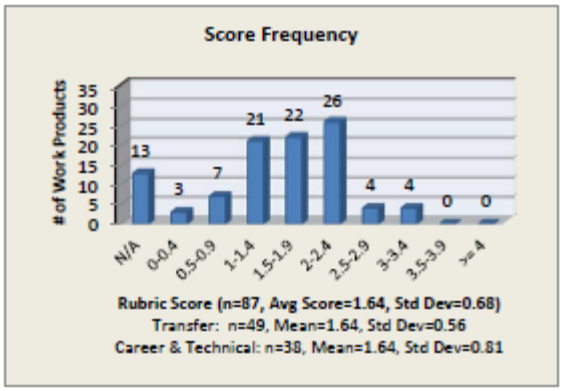
Critical Thinking Spring 2014 Assessment Results

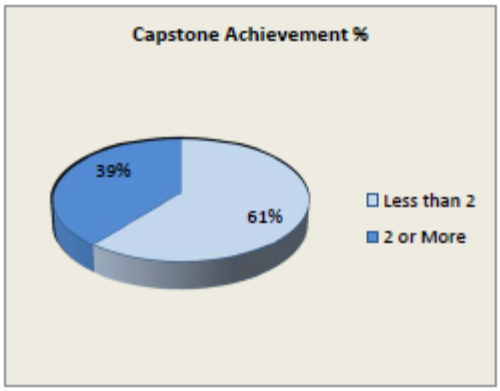
Explanation of Issues



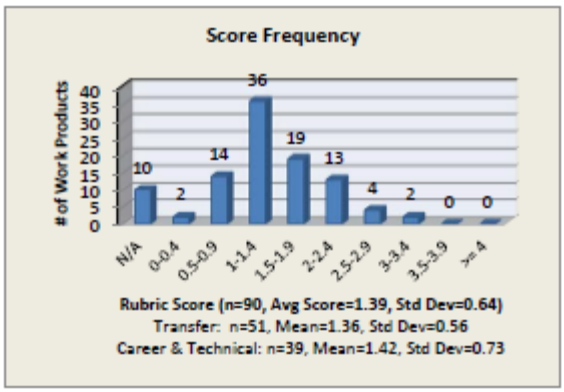


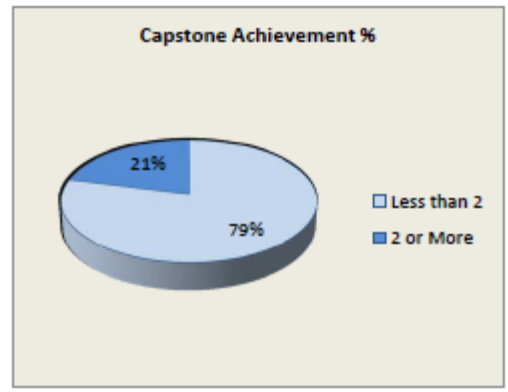
Evidence





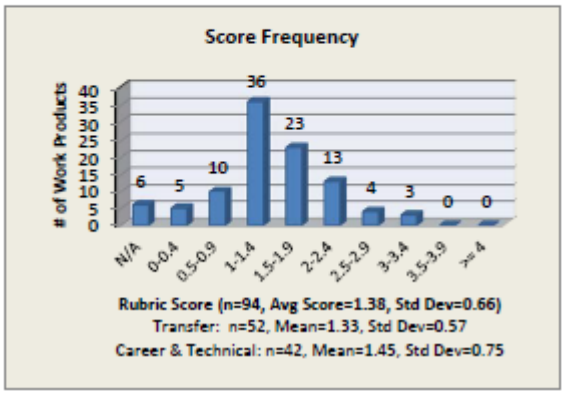
Influence of Context and Assumptions

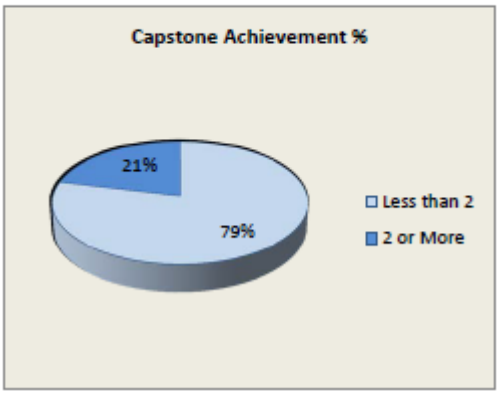




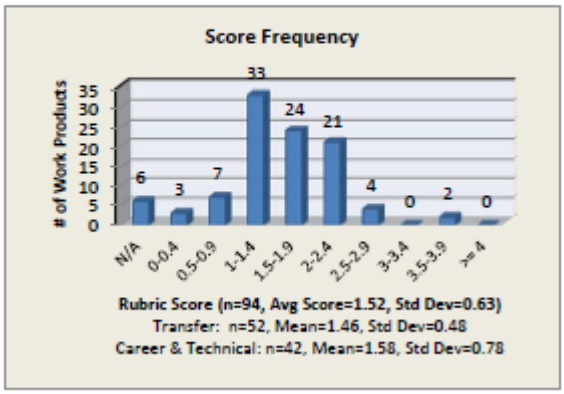
Critical Thinking Spring 2014 Assessment Results

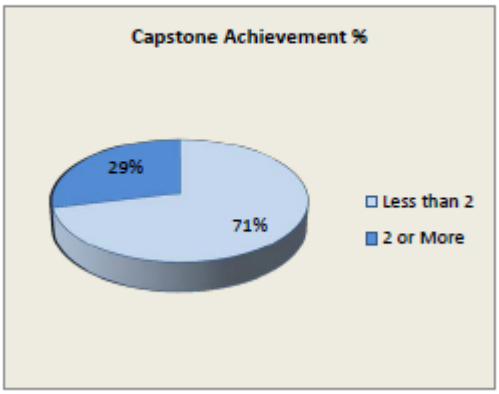
Student's Position - Perspective, Thesis/Hypothesis



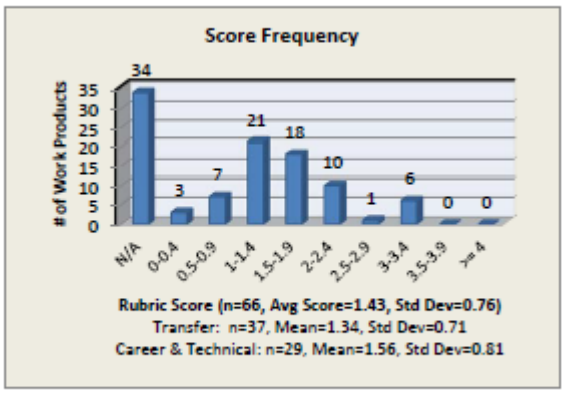


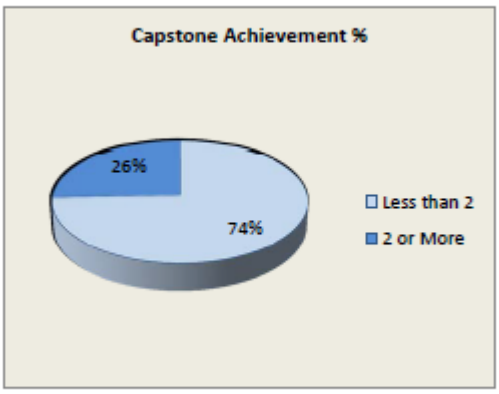
Conclusions and Related Outcomes





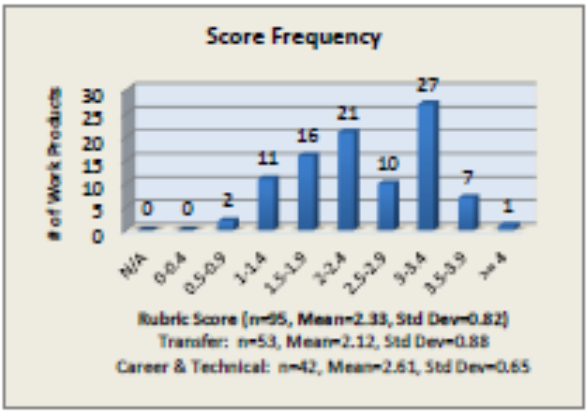
Solving Problems

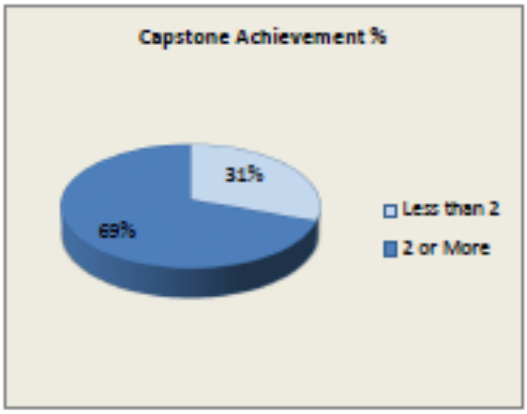




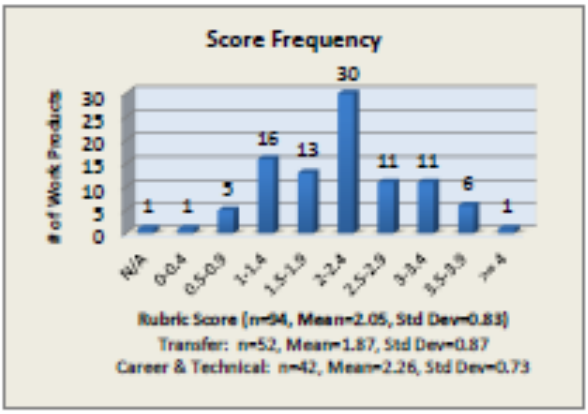
Written Communication Fall 2014 Assessment Results

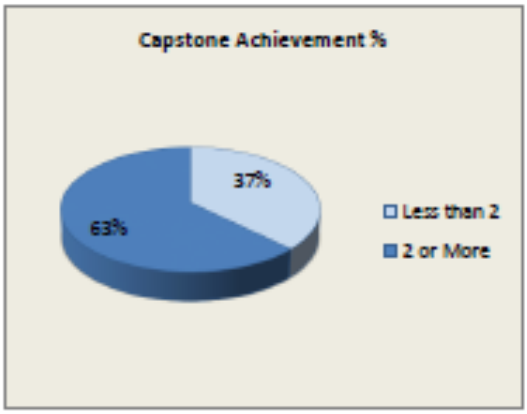
Context of and Purpose for Writing



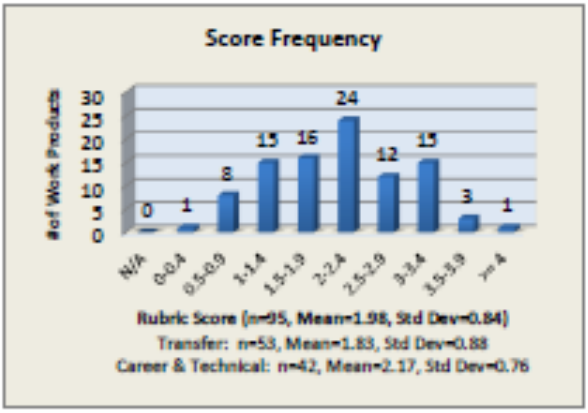


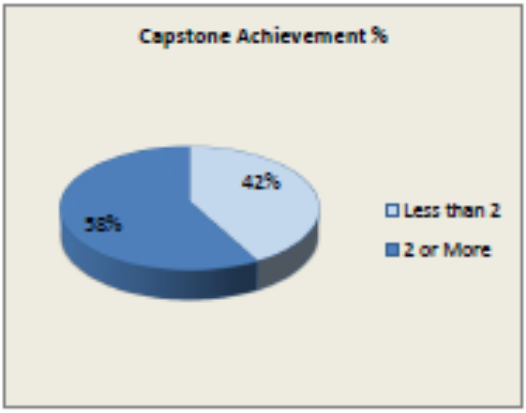
Content Development





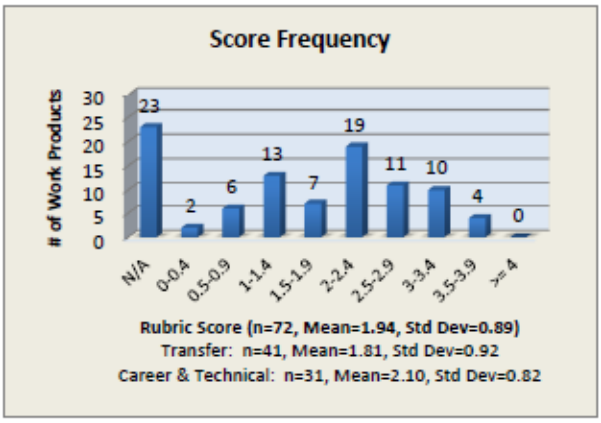
Genre and Disciplinary Conventions

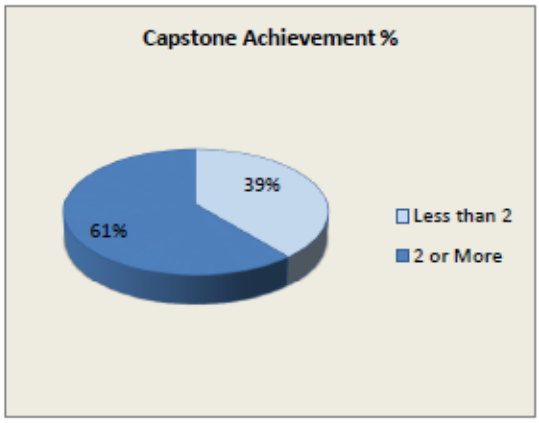




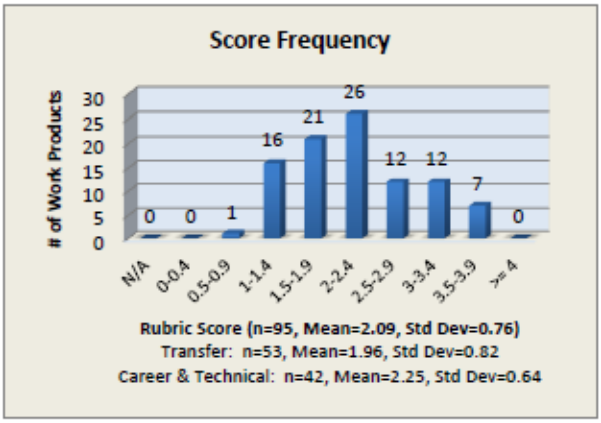
Written Communication Fall 2014 Assessment Results

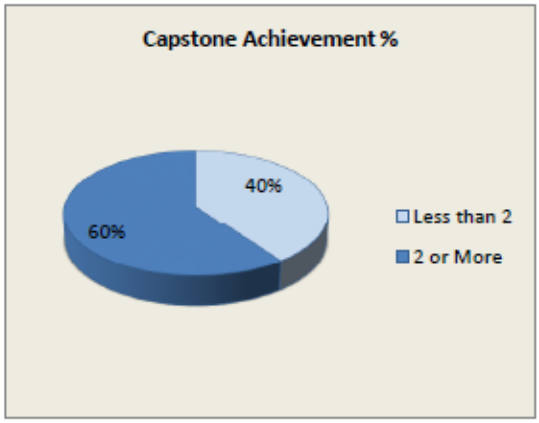
Sources and Evidence





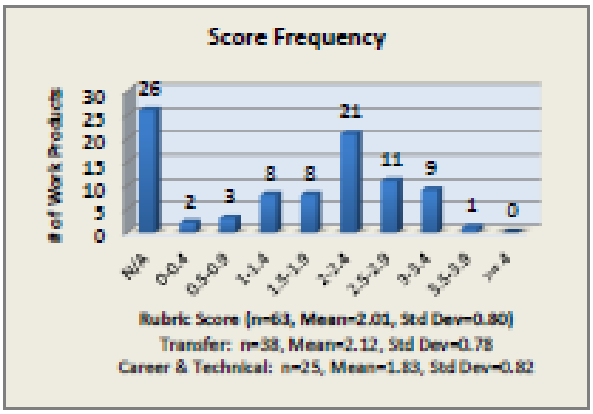
Control of Syntax and Mechanics

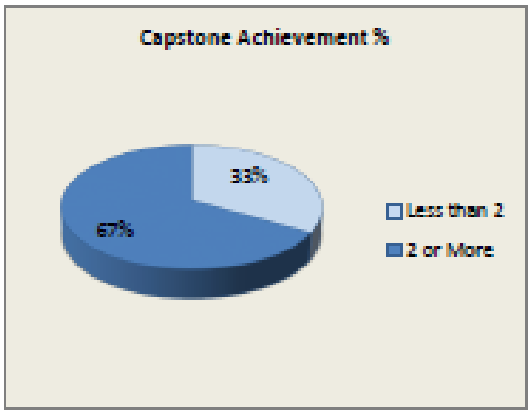




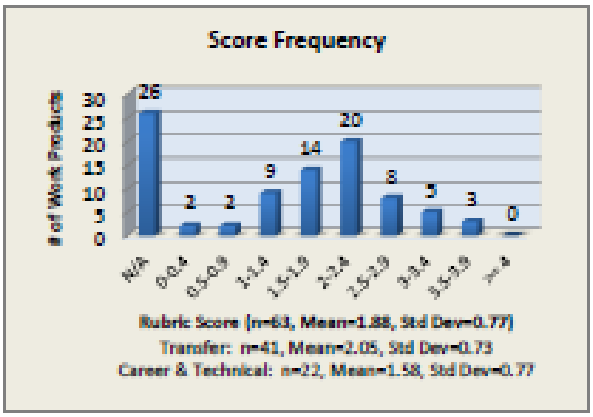
Information Literacy Fall 2014 Assessment Results

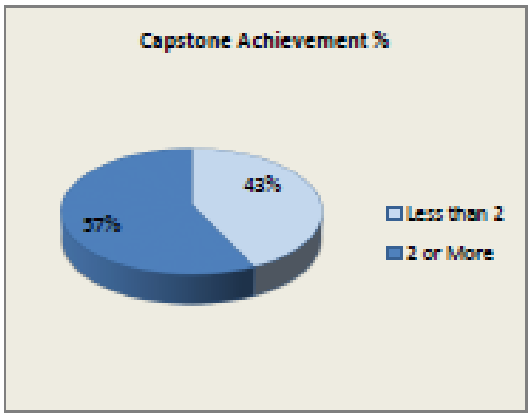
Determine the Extent of Information Needed



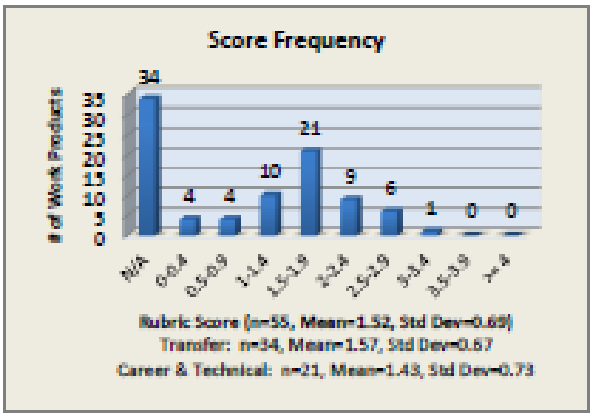


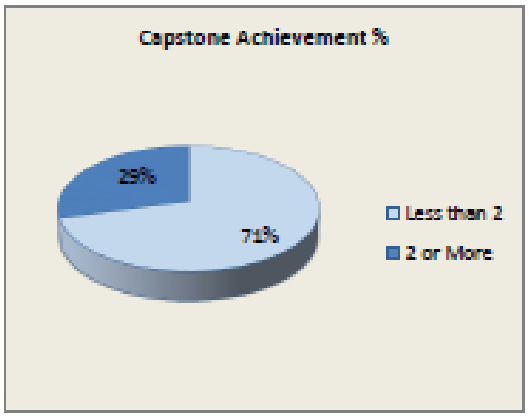
Access the Needed Information





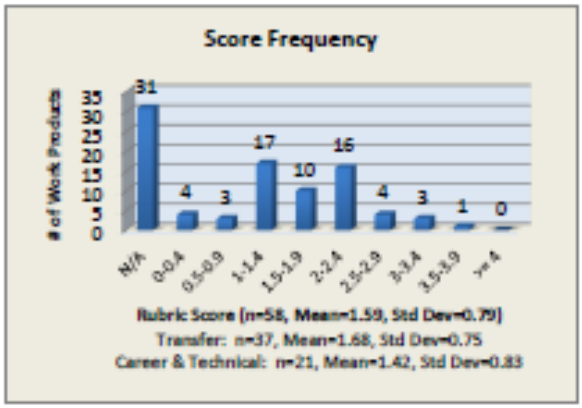
Evaluate Information and Sources Critically

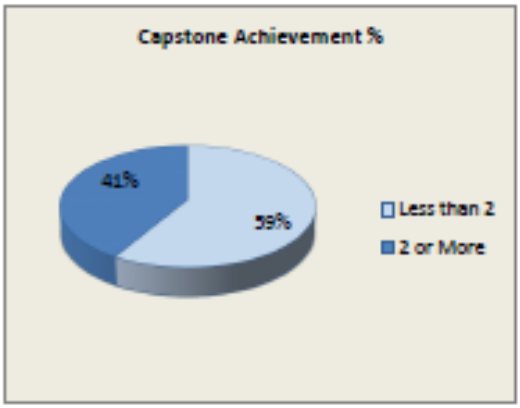




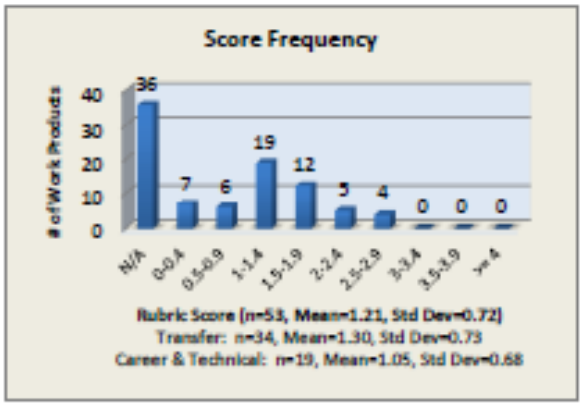
Information Literacy Fall 2014 Assessment Results

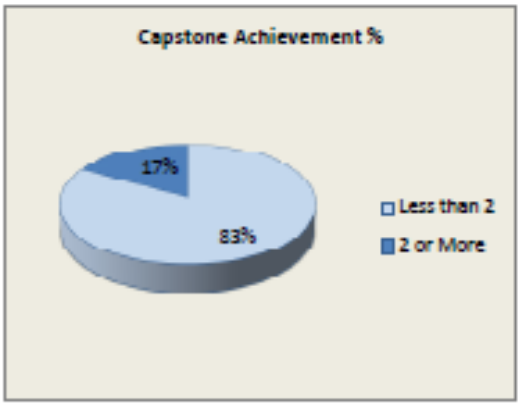
Use Information Effectively to Accomplish a Specific Purpose





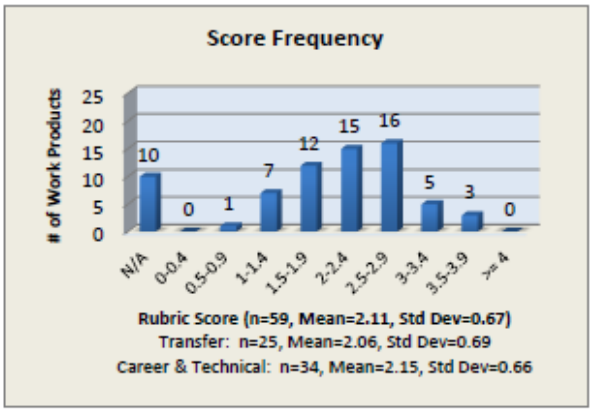
Access and Use Information Ethically and Legally

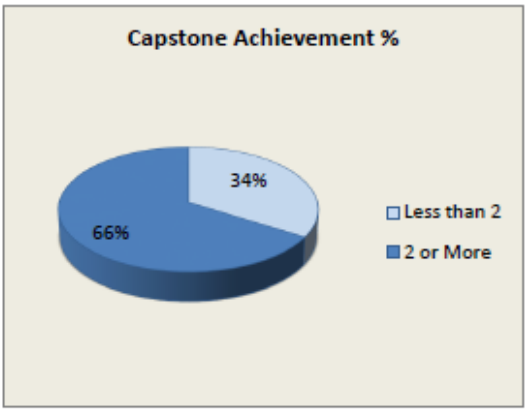




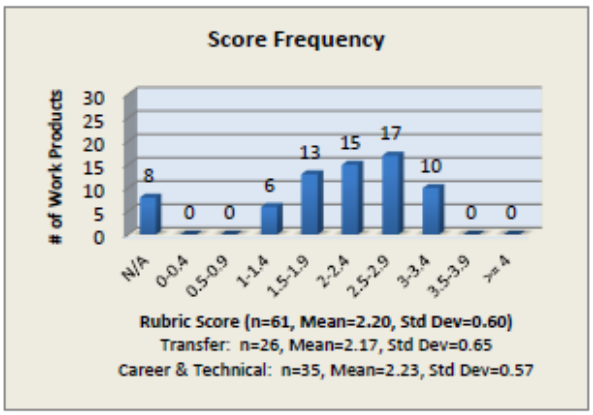
Quantitative Reasoning Spring 2015 Assessment Results

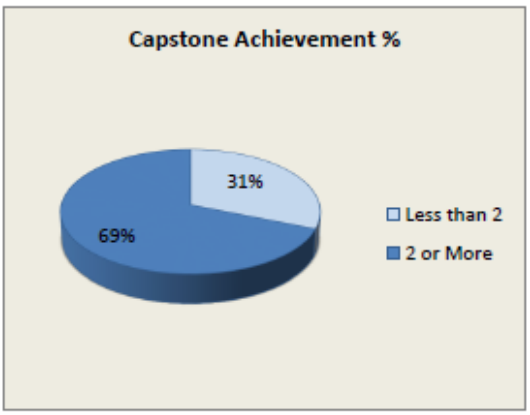
Interpretation



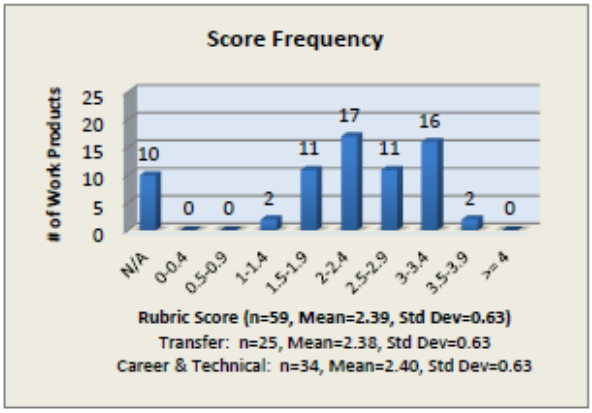


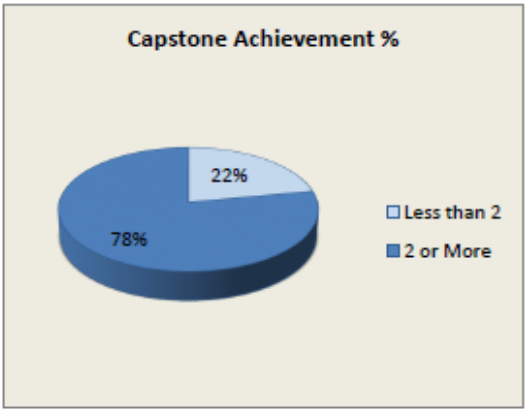
Representation





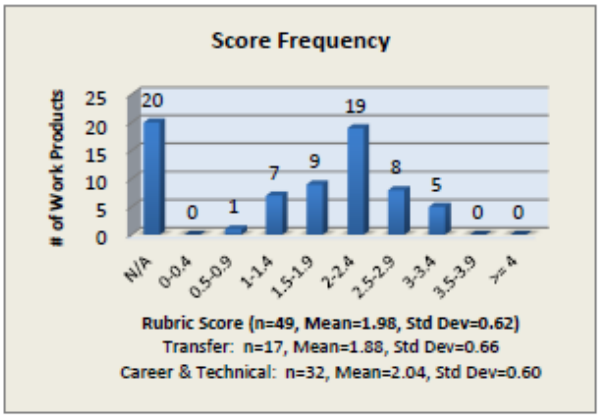
Calculation

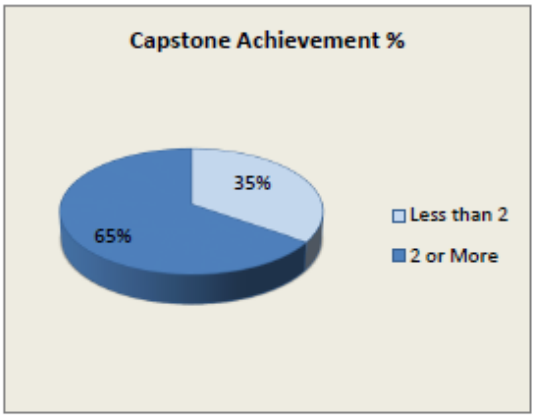




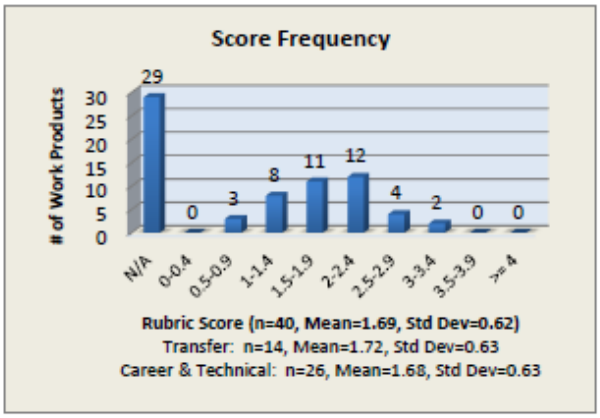
Quantitative Reasoning Spring 2015 Assessment Results

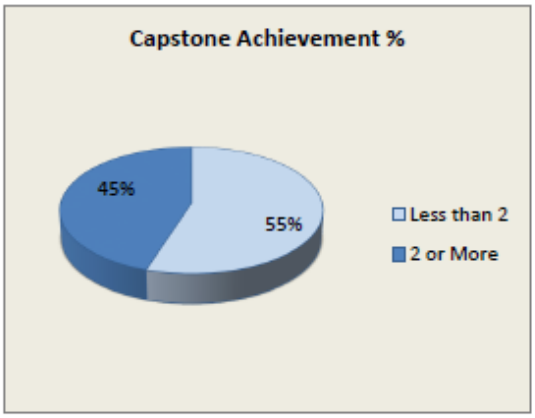
Application/Analysis



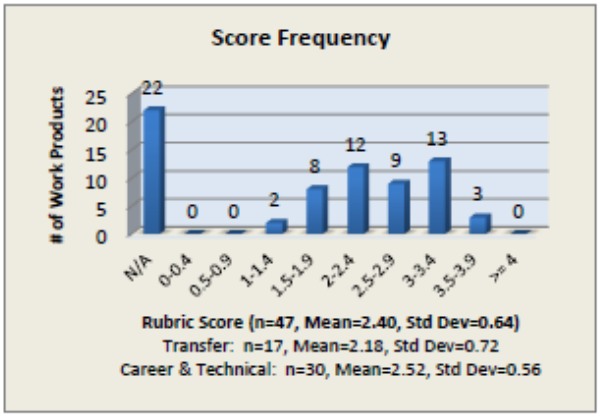


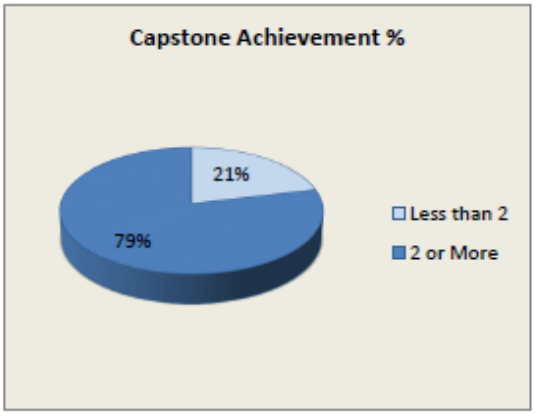
Assumptions





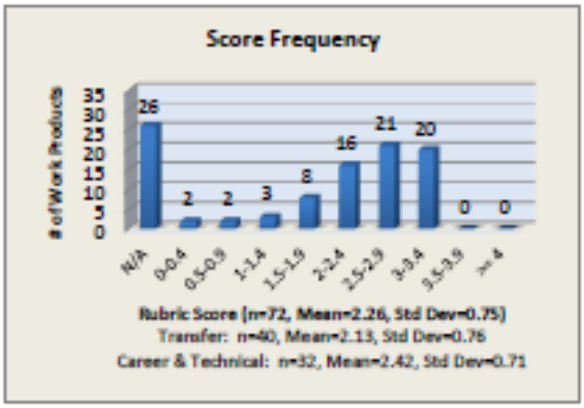
Communication

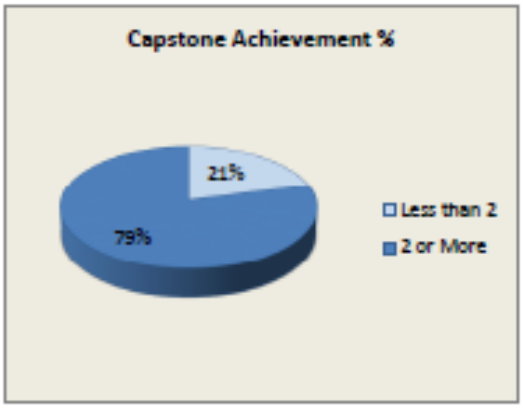




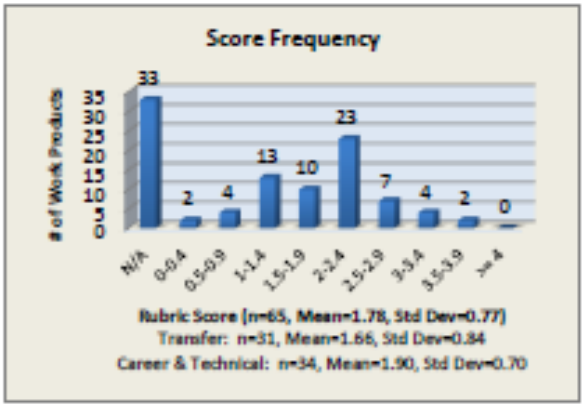
Scientific Reasoning Spring 2015 Assessment Results

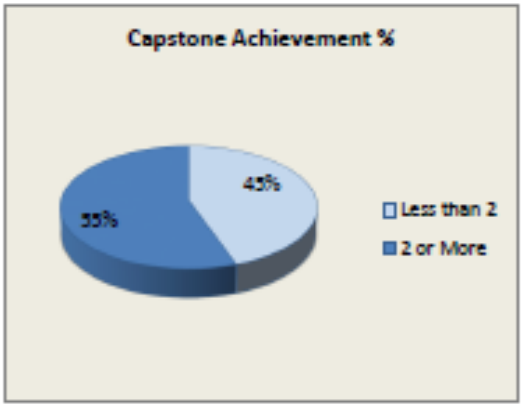
Argument or Topic Selection



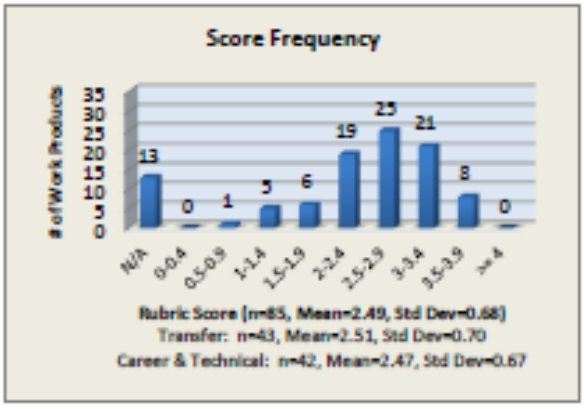


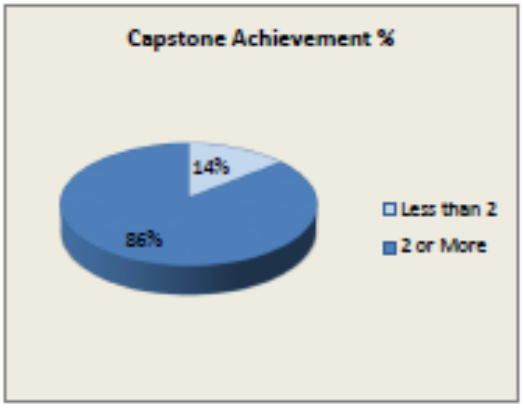
Existing Knowledge, Research and/or Views





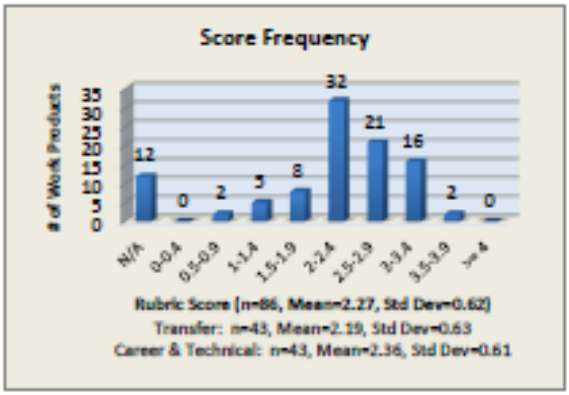
Methodology

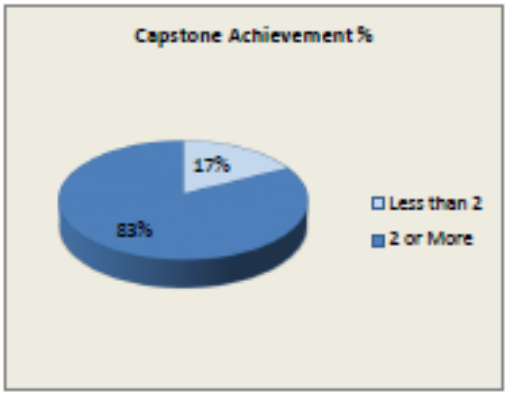




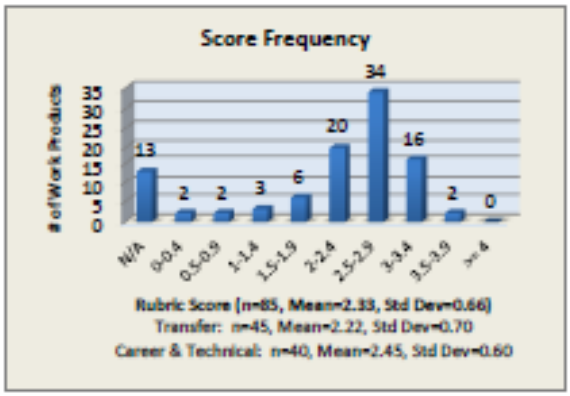
Scientific Reasoning Spring 2015 Assessment Results

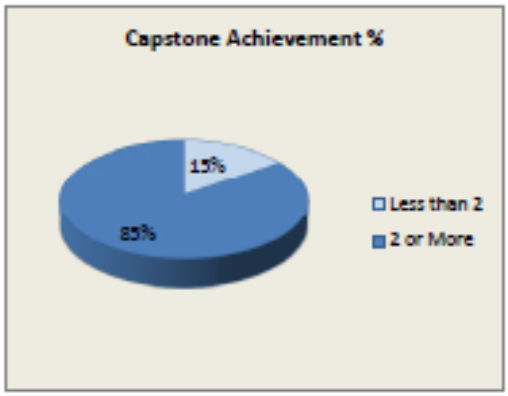
Analysis





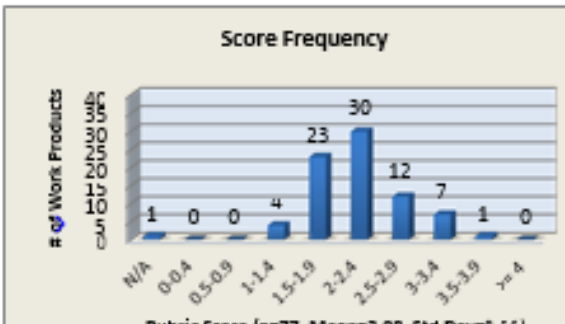
Conclusions, Limitations and Implications

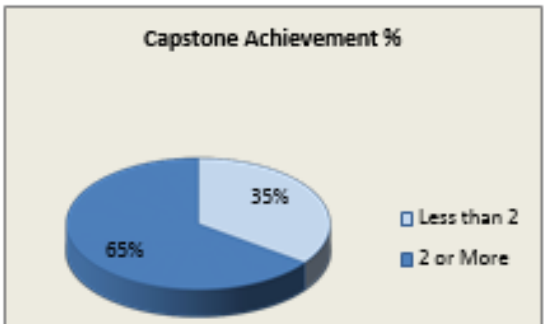




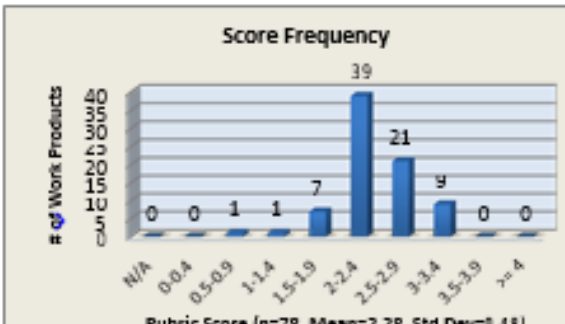
Oral Communication Fall 2015 Student Learning Results

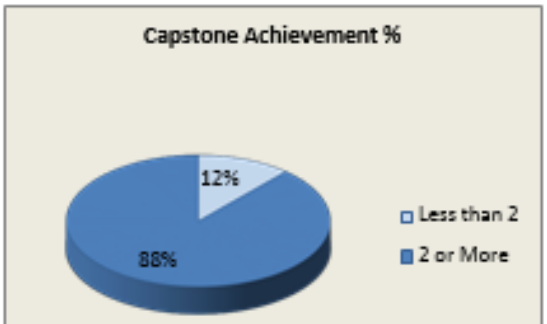
Organization



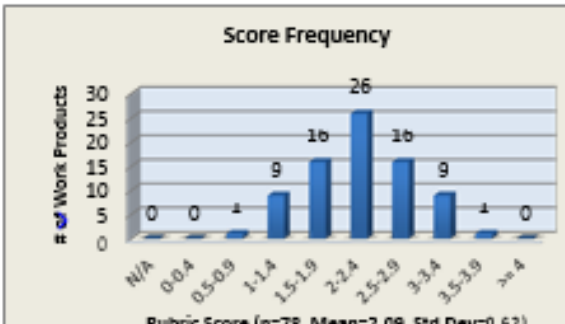


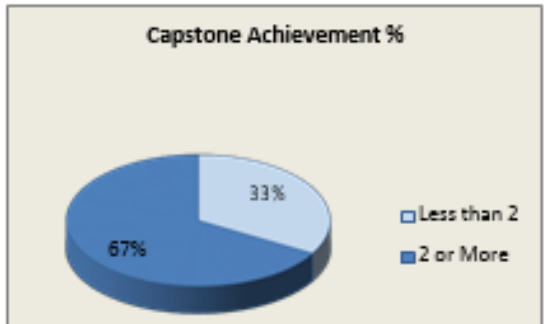
Language





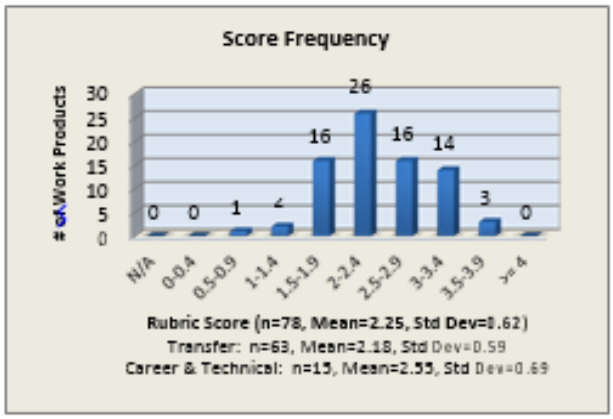
Delivery

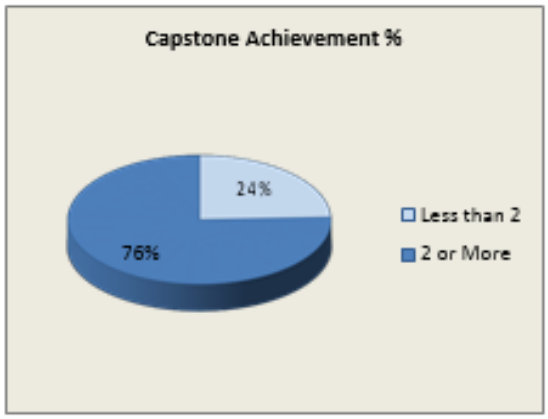




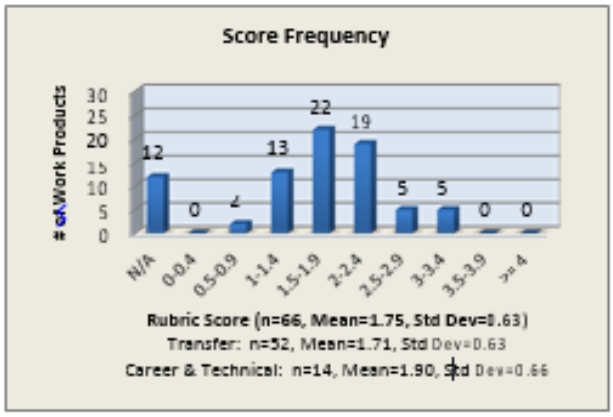
Oral Communication Fall 2015 Student Learning Results

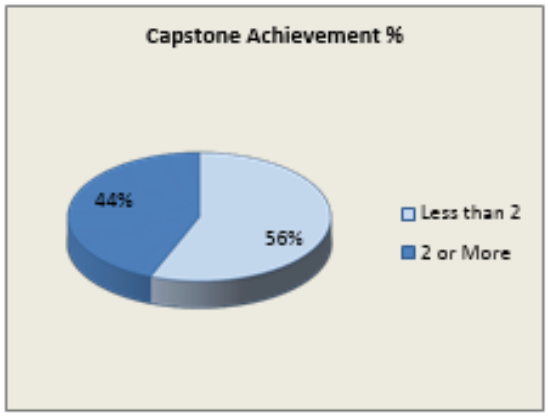
Central Message





Supporting Material

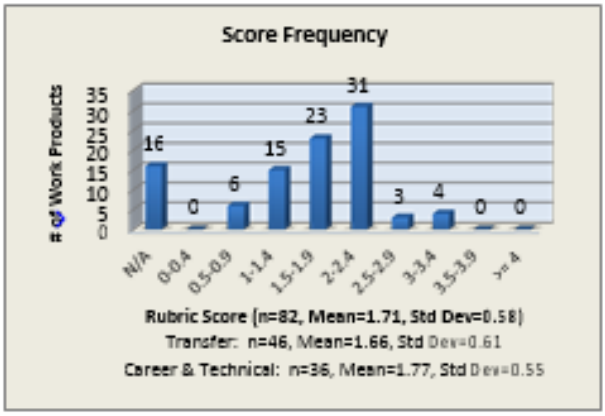


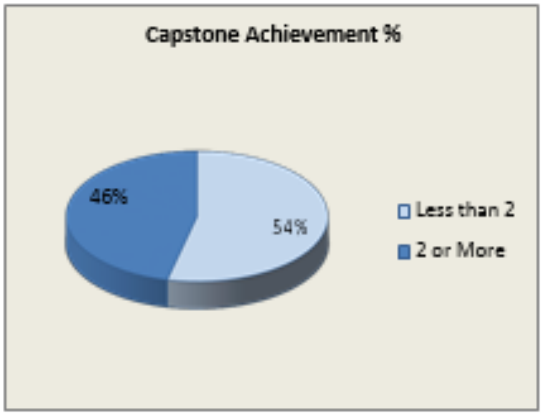


Cultural and Social Understanding Fall 2015 Student Learning Results

Knowledge

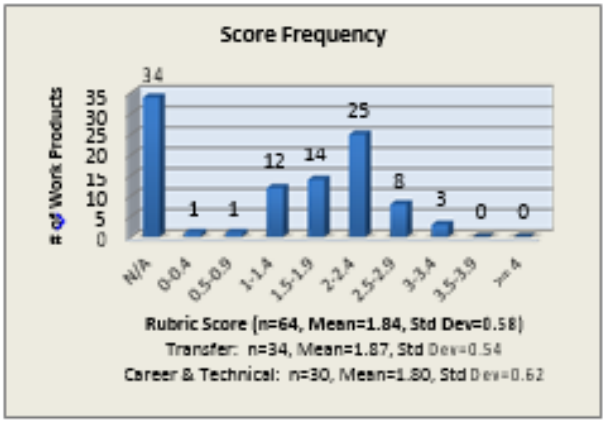
(Assess the impact that institutions have on individuals and culture)

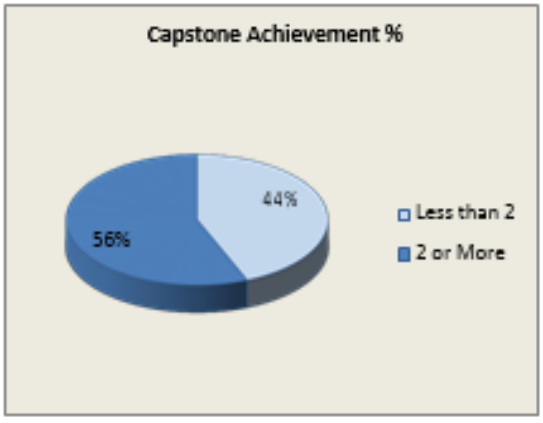




Knowledge

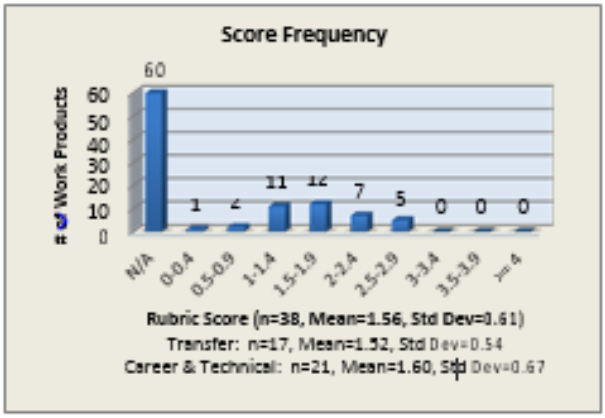
(Describes their own as well as others' personal ethical systems and values)

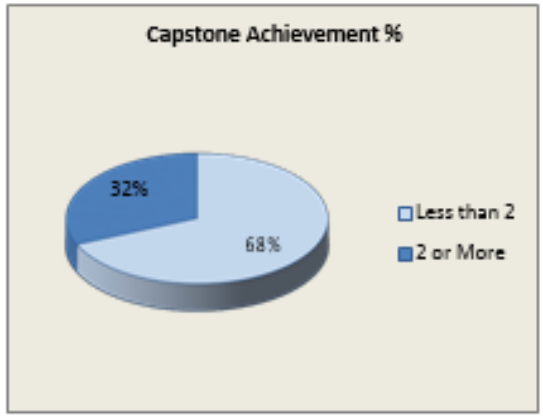




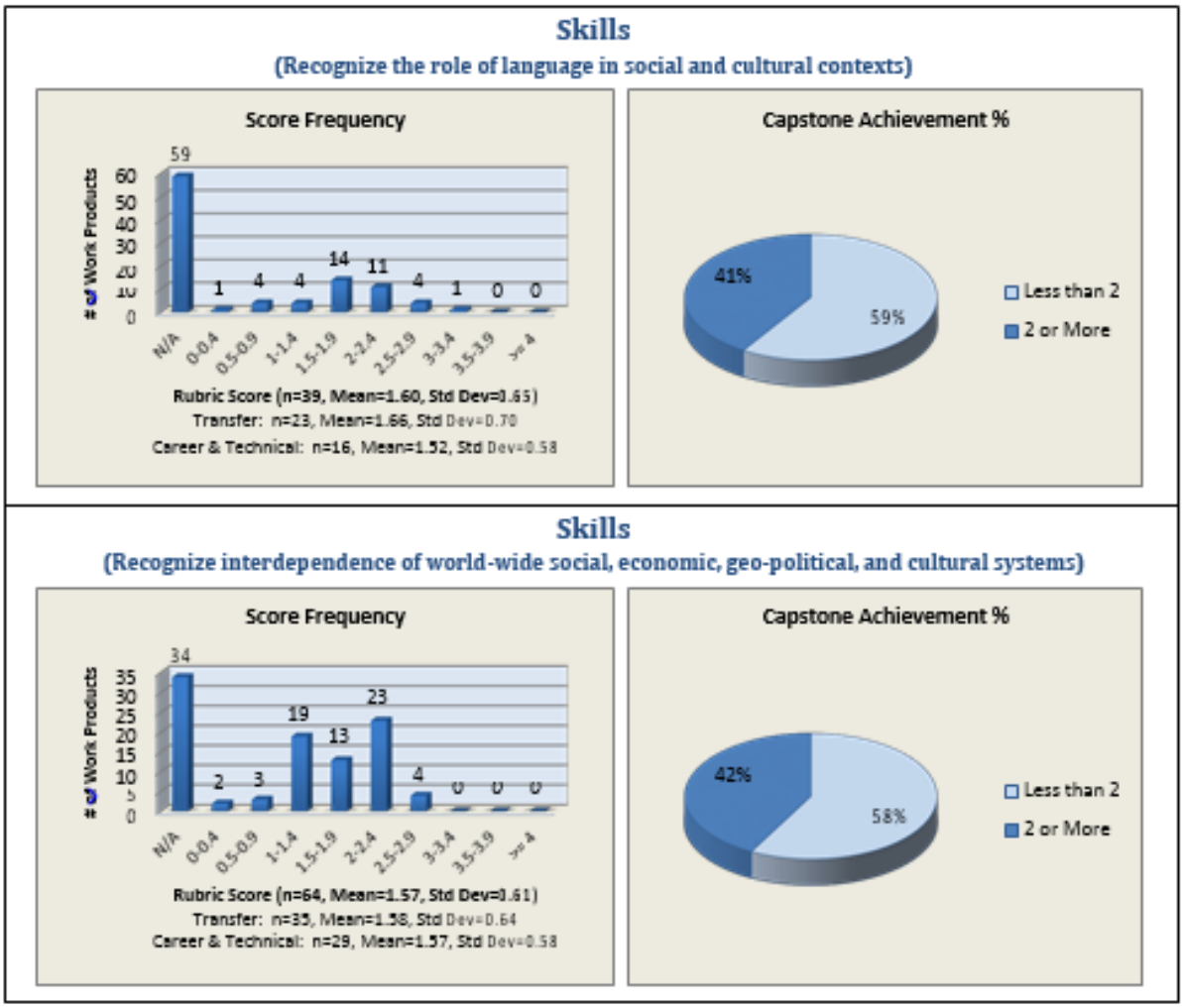
Skills

(Recognize the impact that arts and humanities have upon individuals and cultures)



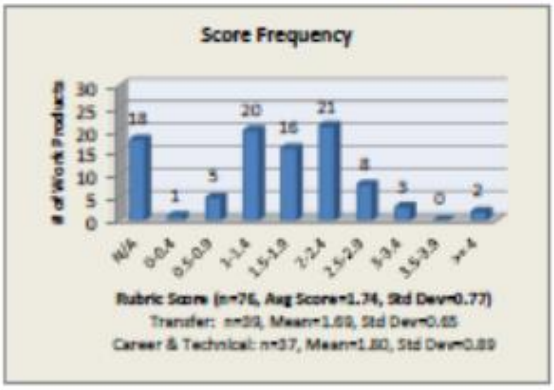


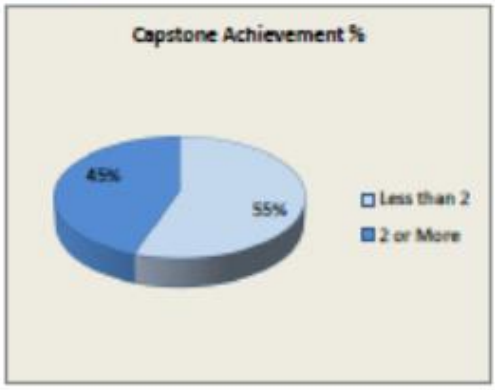
Cultural and Social Understanding Fall 2015 Student Learning Results



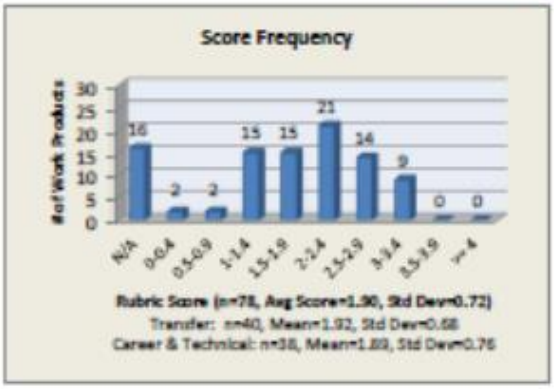
Personal Development Spring 2016 Student Learning Results

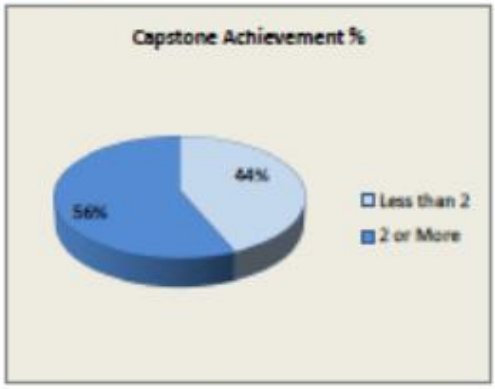
Personal Wellness



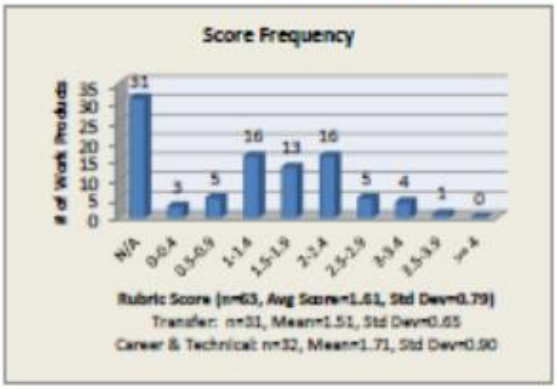


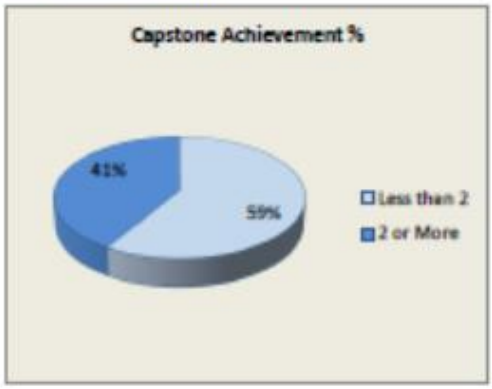
Decision-Making



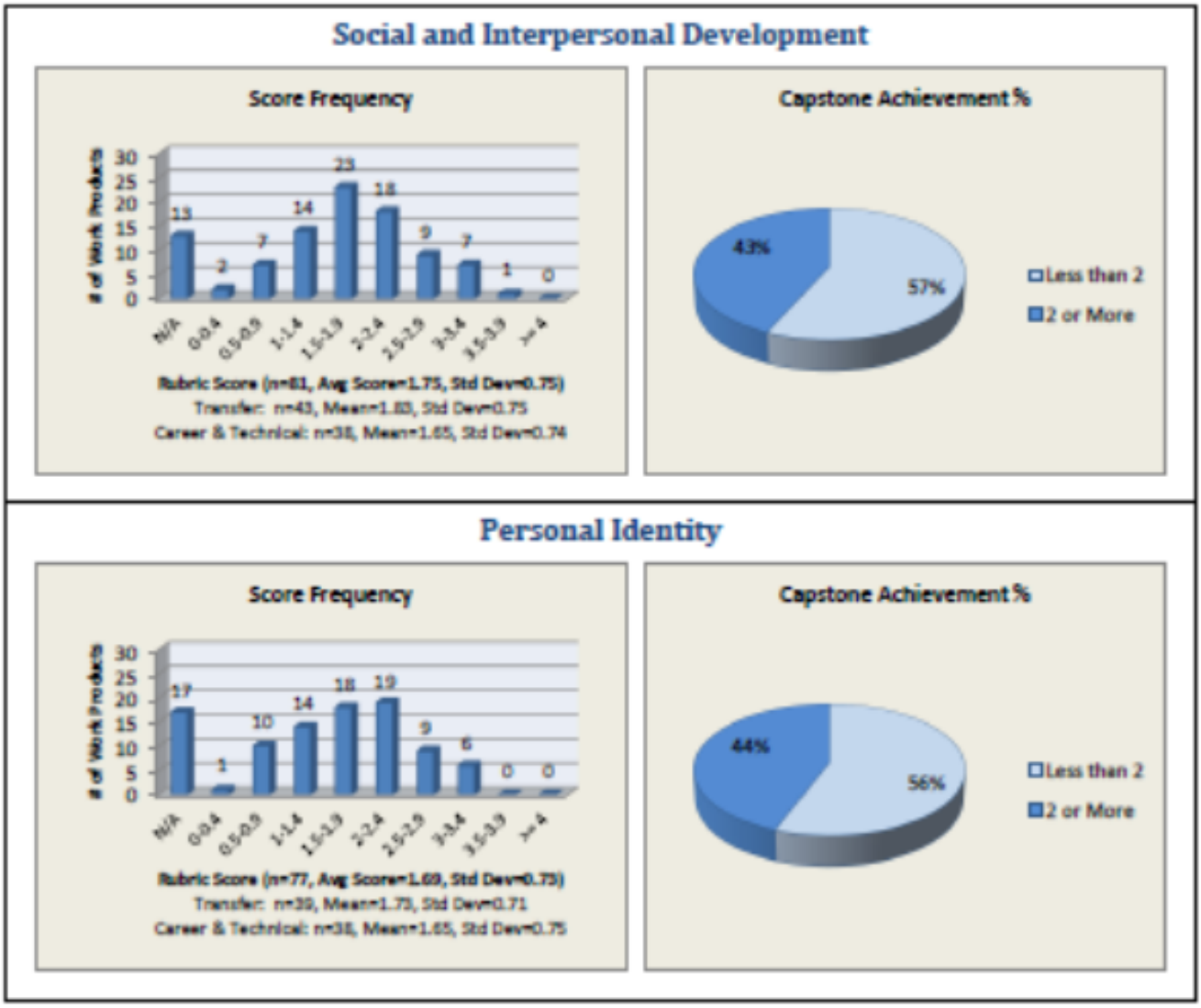


Academic and Professional Goal-Setting

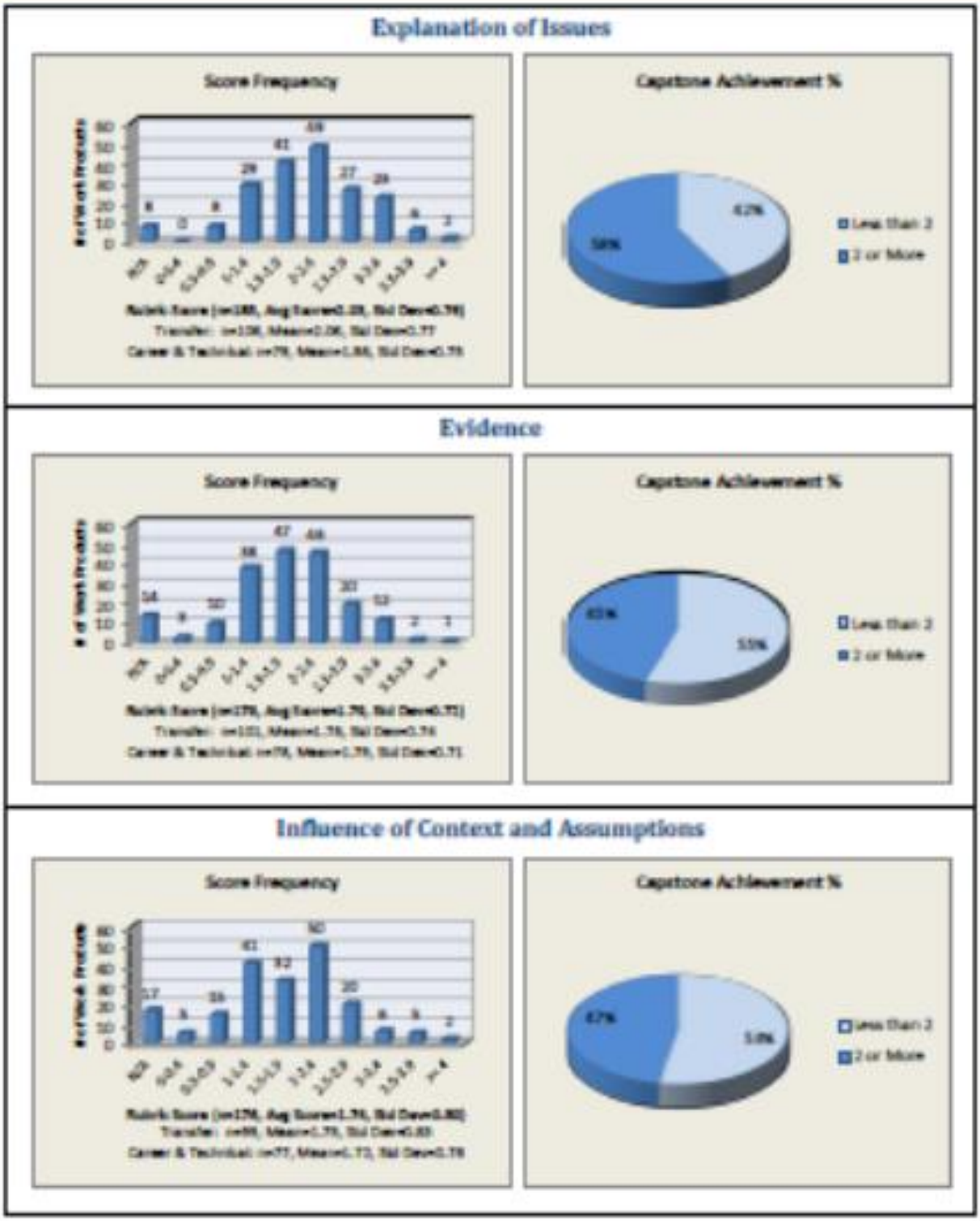




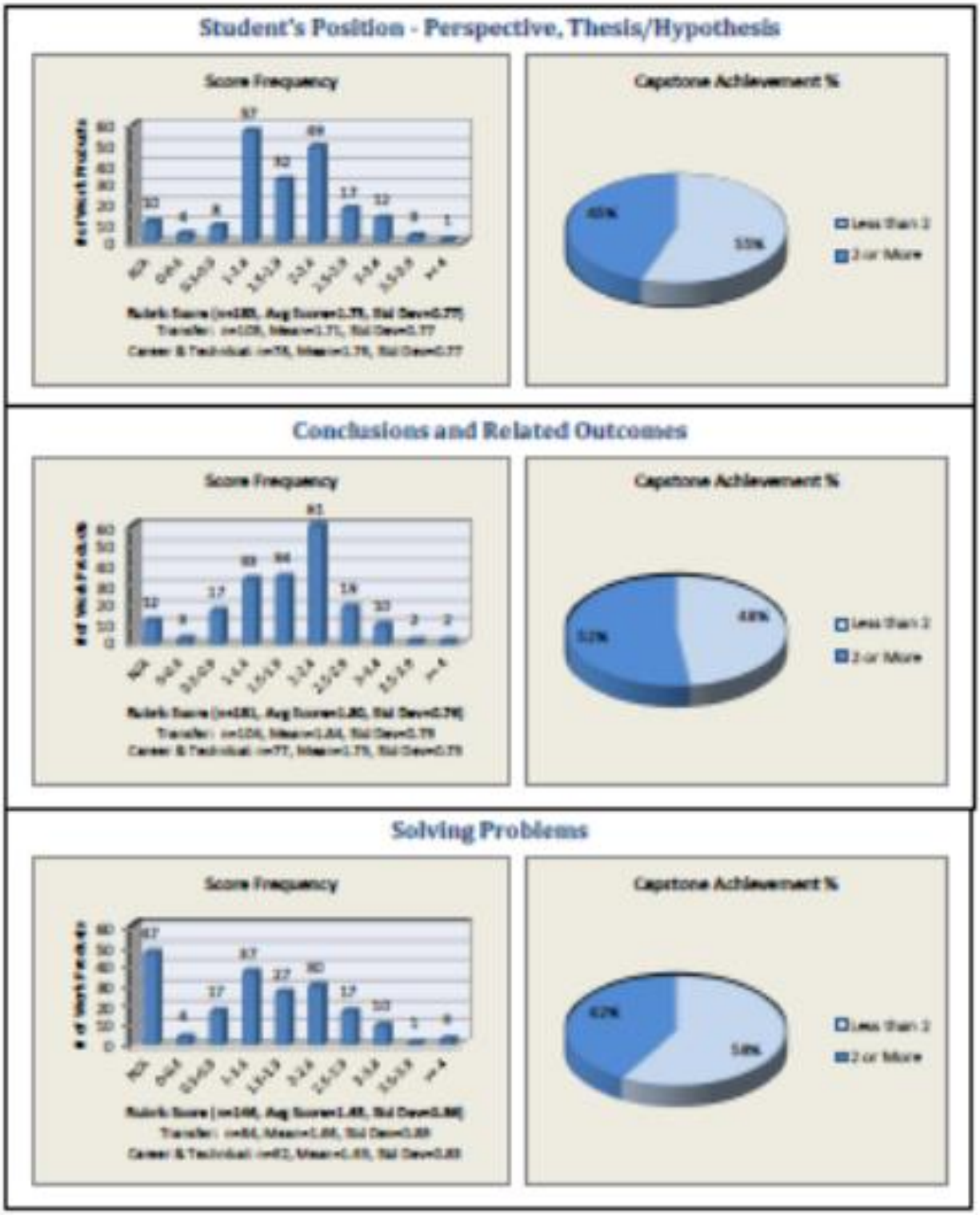
Personal Development Spring 2016 Student Learning Results



Critical Thinking Fall 2016 Student Learning Results

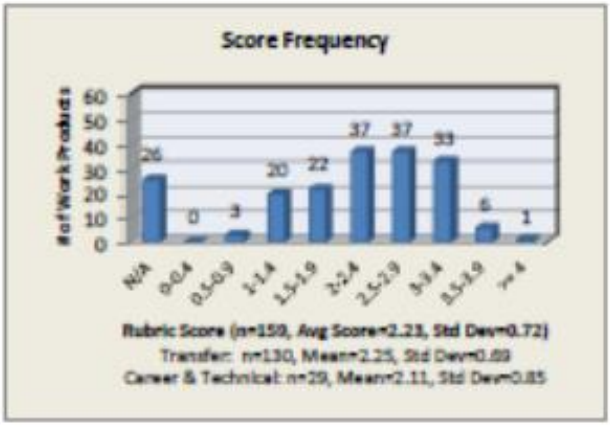


Critical Thinking Fall 2016 Student Learning Results

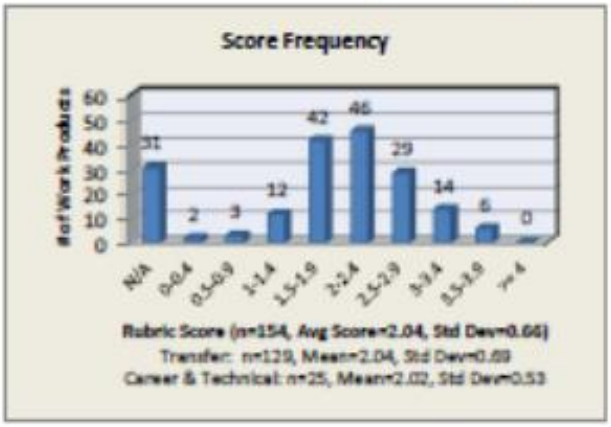


Scientific Reasoning Spring 2017 Student Learning Results

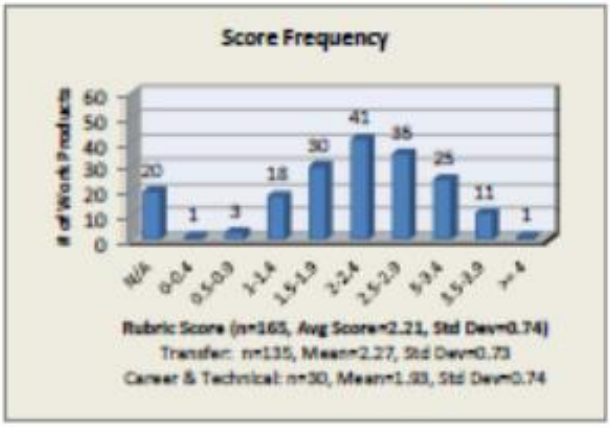
Argument or Topic Selection



Existing Knowledge, Research and/or Views

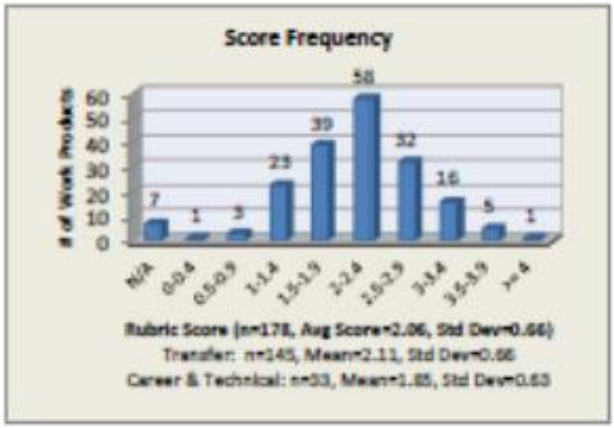


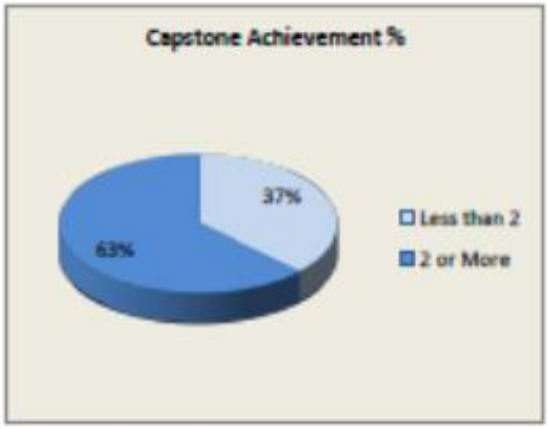
Methodology



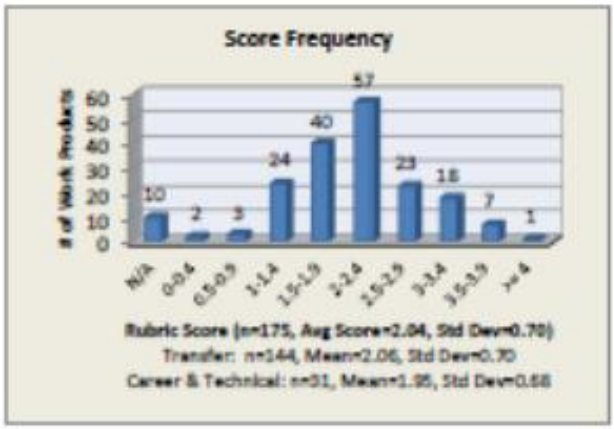
Scientific Reasoning Spring 2017 Student Learning Results

Analysis



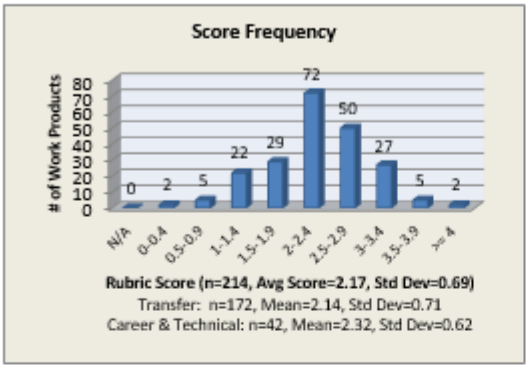


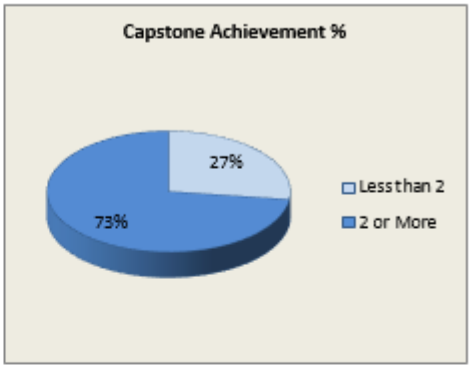
Conclusions, Limitations and Implications



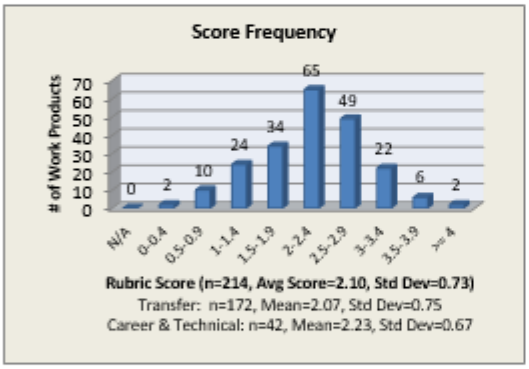
Written Communication Fall 2017 Student Learning Results

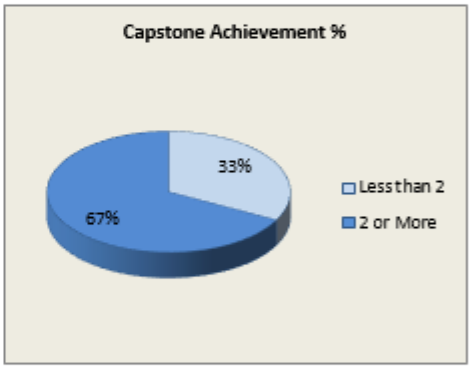
Context of and Purpose for Writing



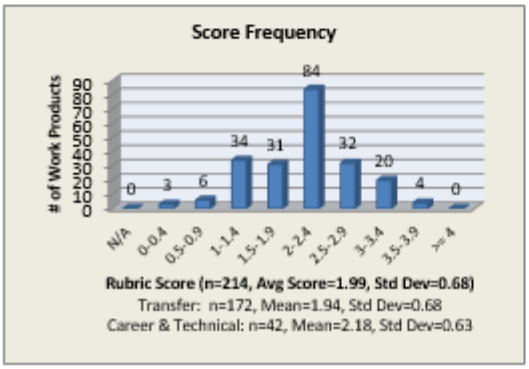


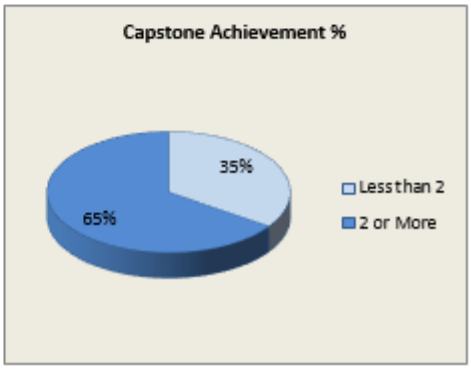
Content Development





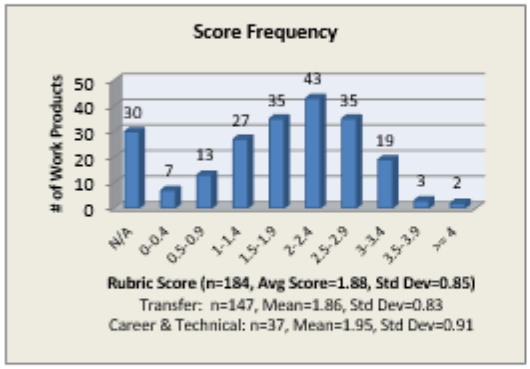
Genre and Disciplinary Conventions

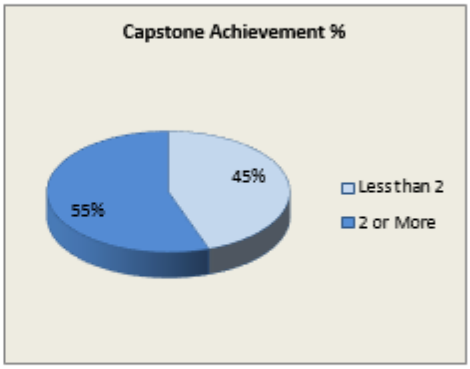




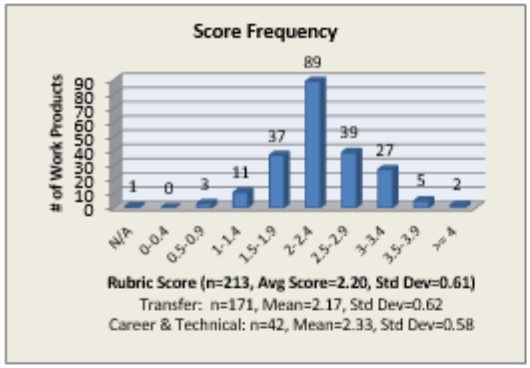
Written Communication Fall 2017 Student Learning Results

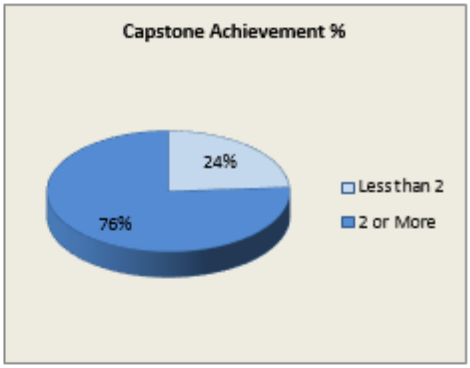
Sources and Evidence





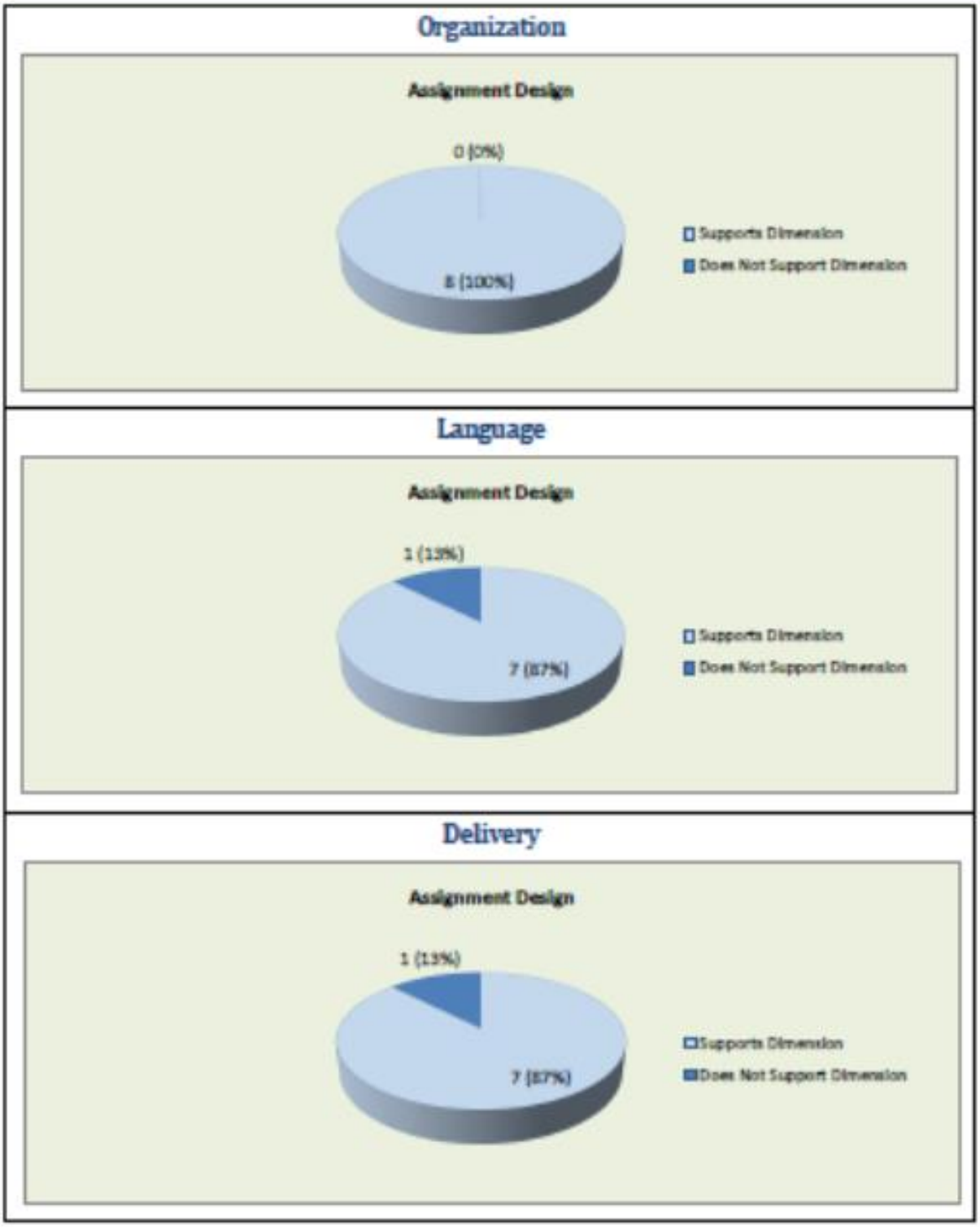
Control of Syntax and Mechanics



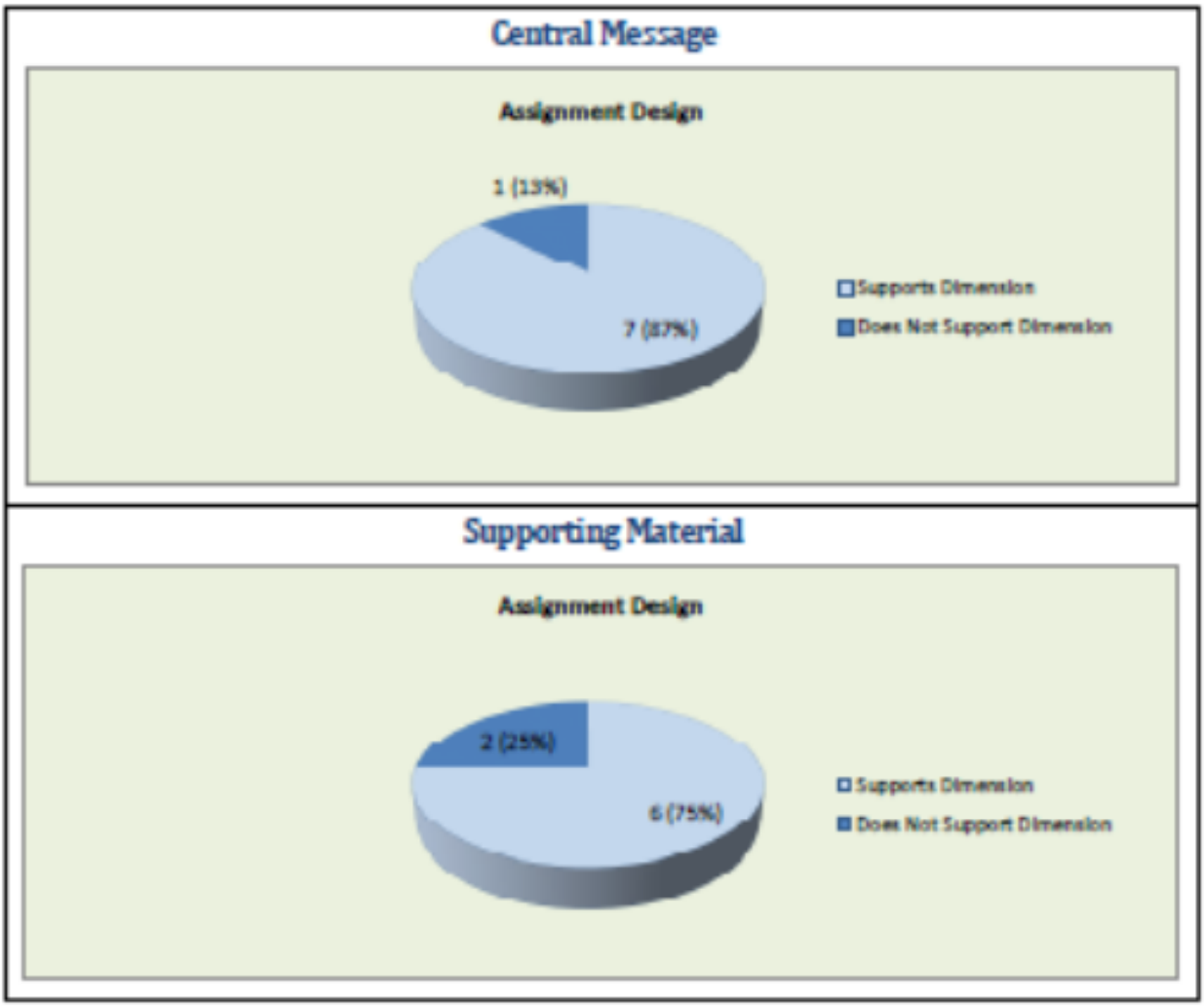


Appendix F: Assignment Design Data Analysis

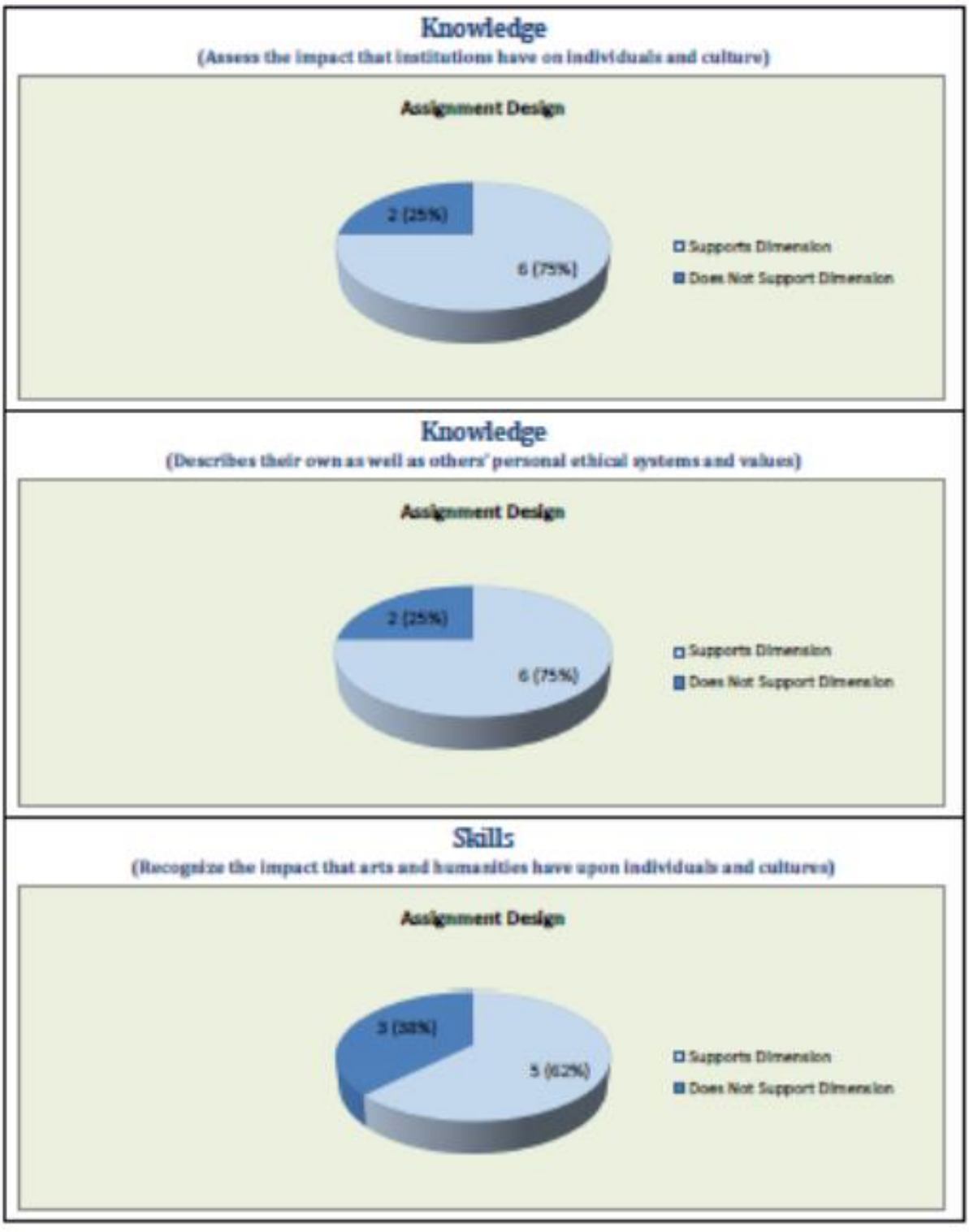
Oral Communication Fall 2015 Assignment Design Results



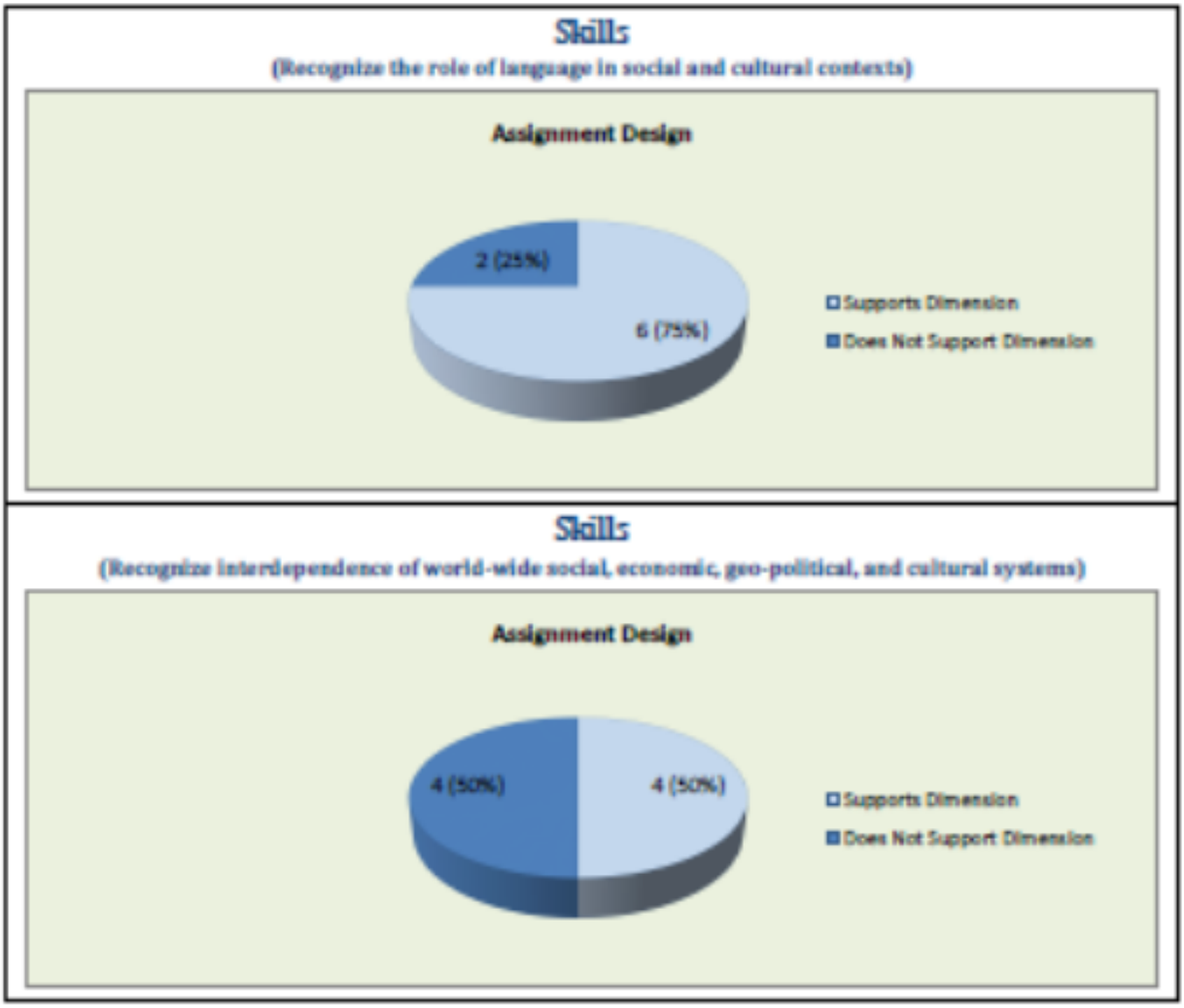
Oral Communication Fall 2015 Assignment Design Results

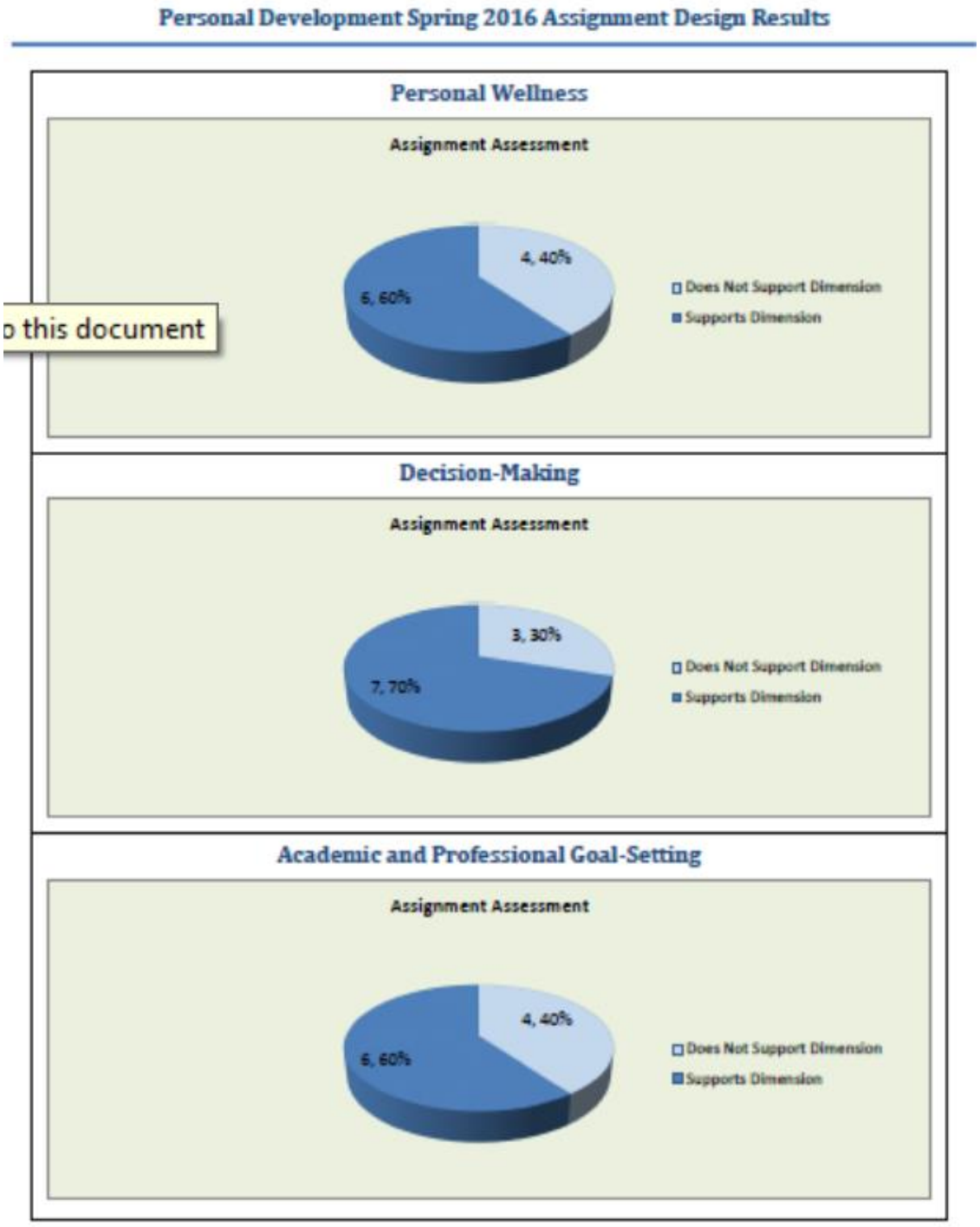


Cultural and Social Understanding Fall 2015 Assignment Design Results

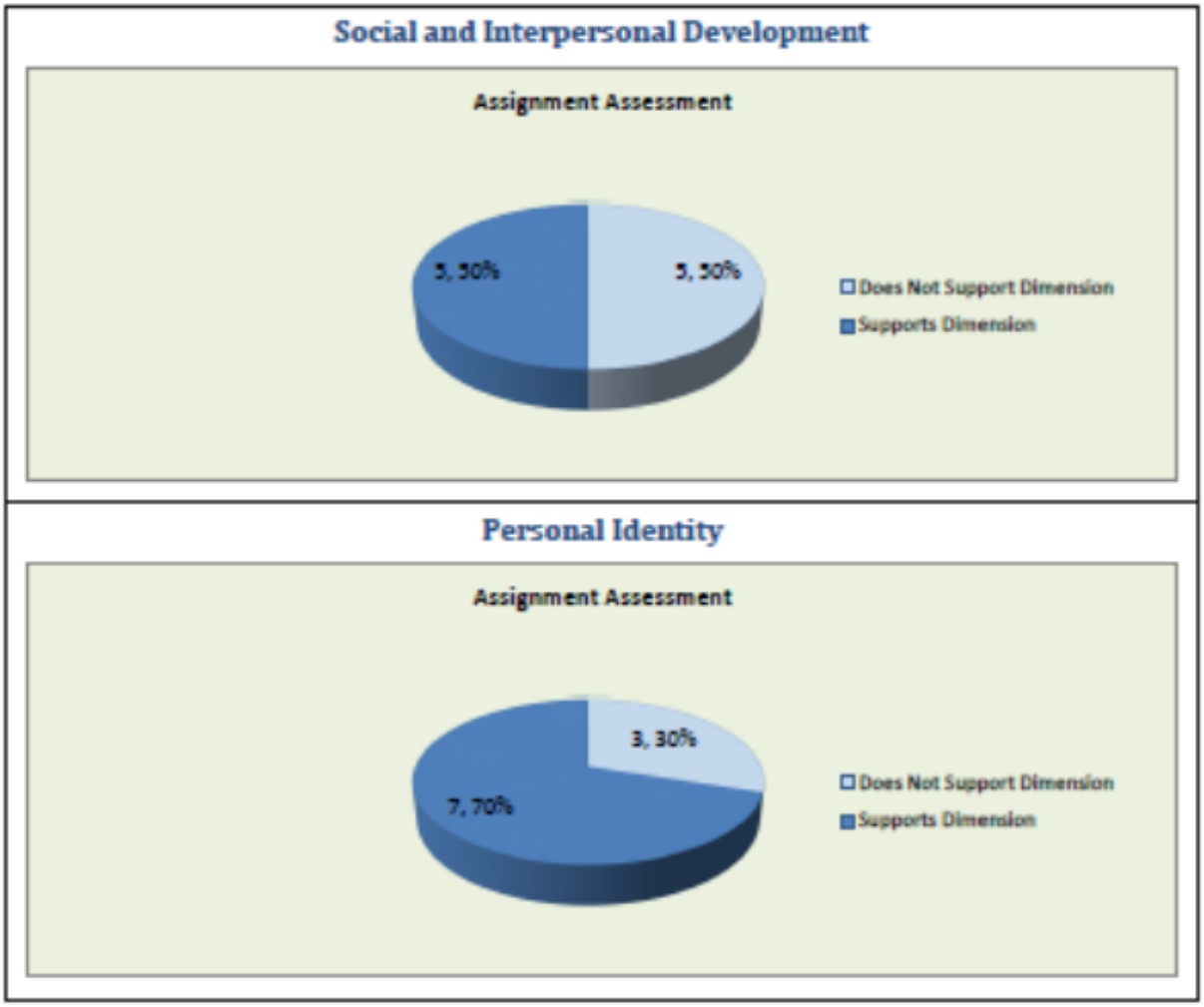


Cultural and Social Understanding Fall 2015 Assignment Design Results

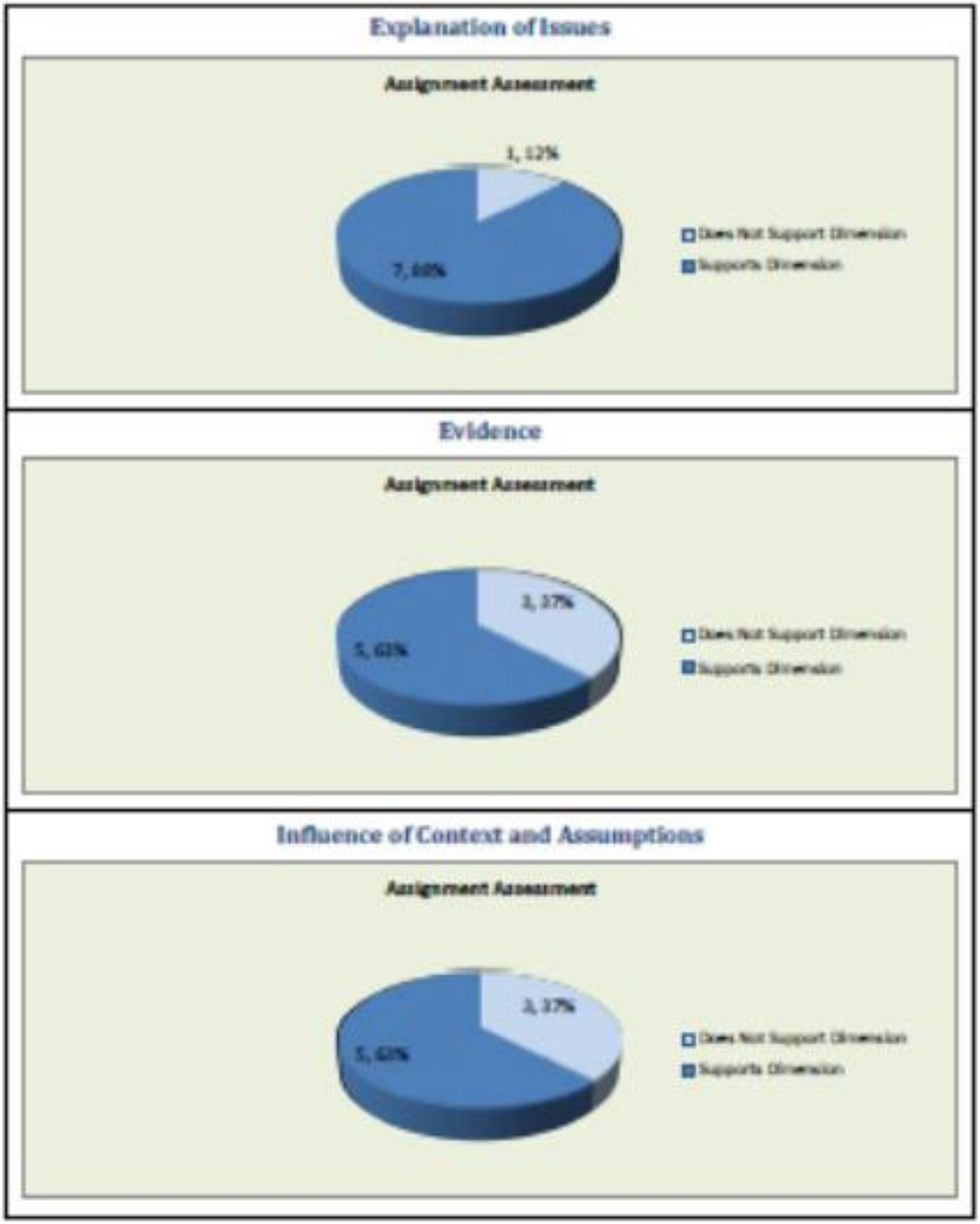



Personal Development Spring 2016 Assignment Design Results
Personal Wellness
Assignment Assessment
4, 40%
6, 60%
Does Not Support Dimension
Supports Dimension
Decision-Making
Assignment Assessment
3, 30%
7, 70%
Does Not Support Dimension
Supports Dimension
Academic and Professional Goal-Setting
Assignment Assessment
4, 40%
6, 60%
Does Not Support Dimension
Supports Dimension

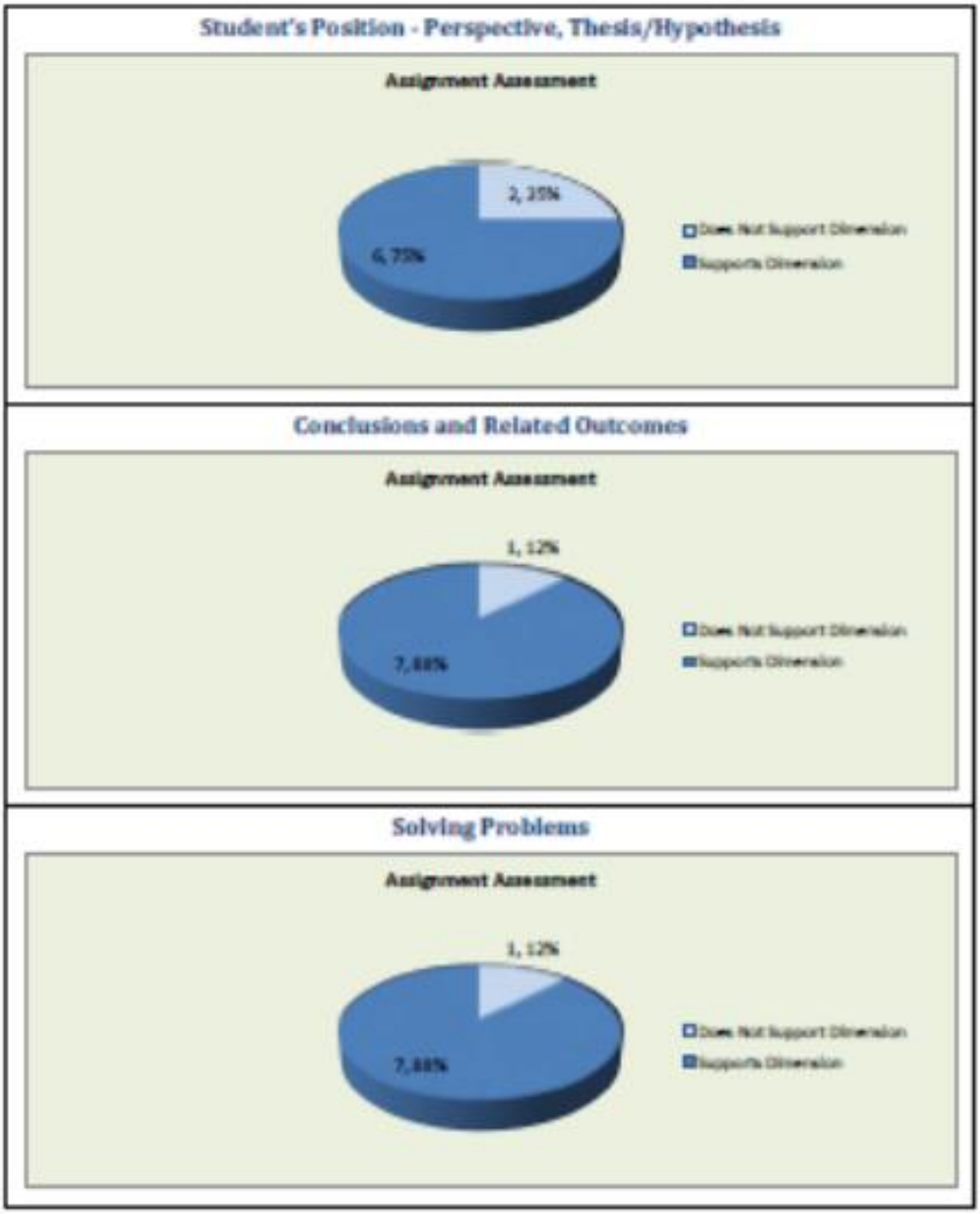
Personal Development Spring 2016 Assignment Design Results



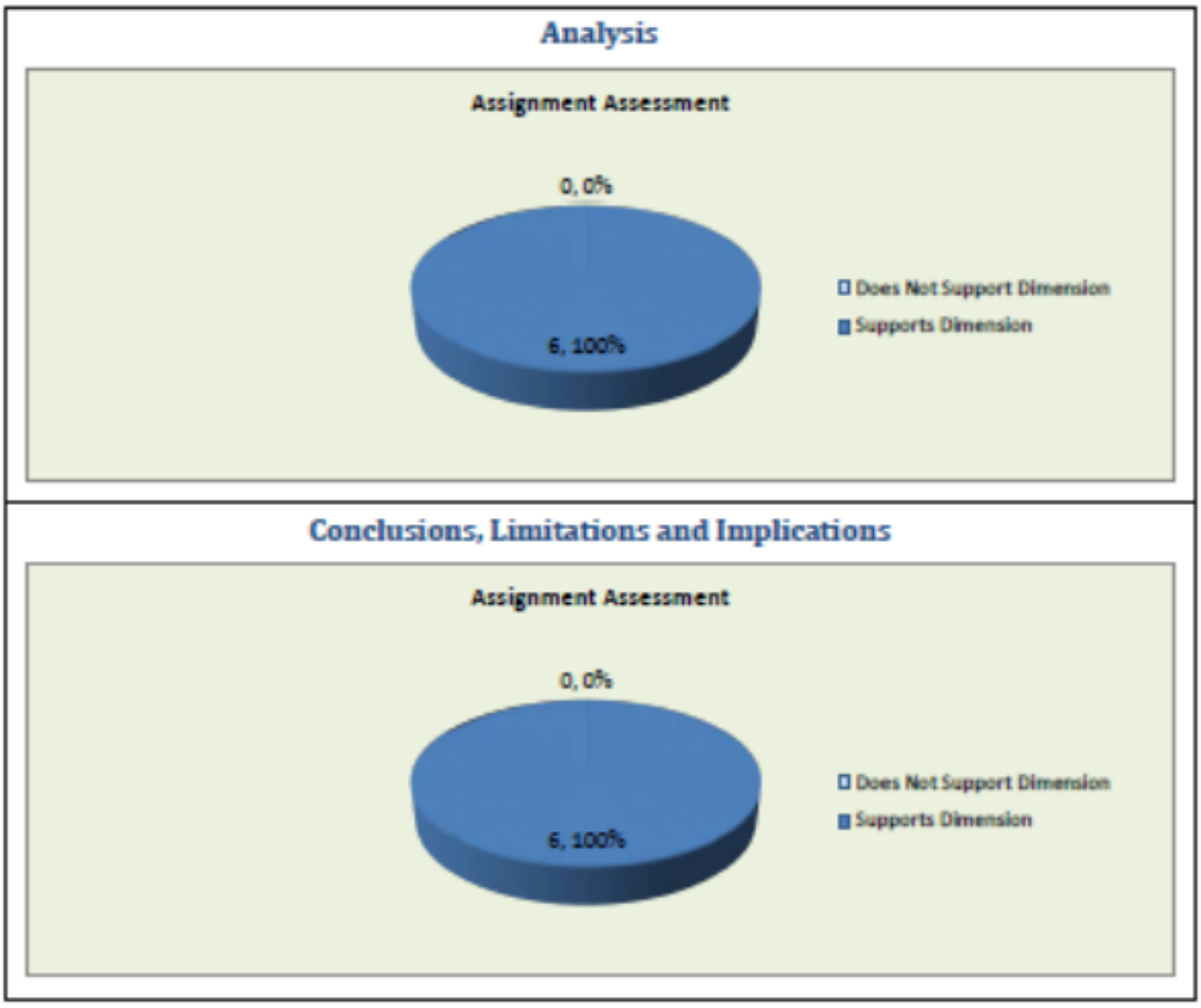
Critical Thinking Fall 2016 Assignment Design Results



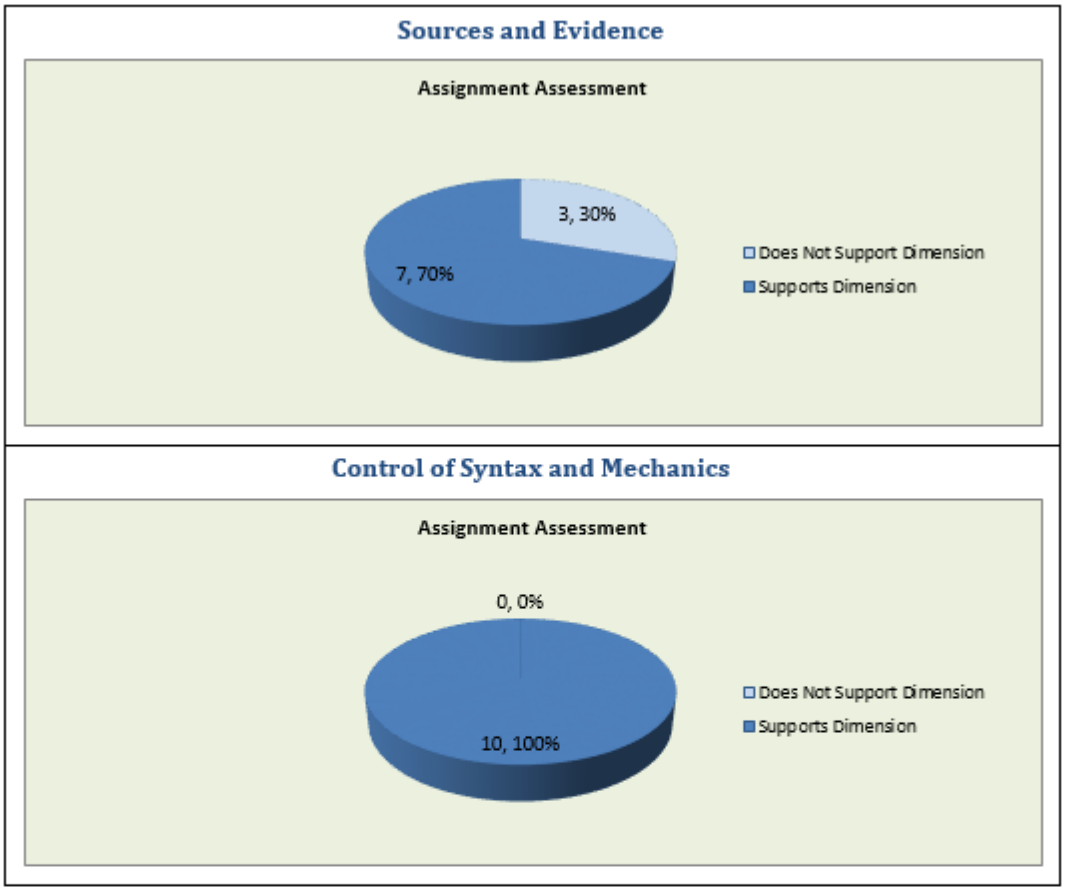
Critical Thinking Fall 2016 Assignment Design Results



Scientific Reasoning Spring 2017 Assignment Design Results



Written Communication Fall 2017 Assignment Design Results



Appendix G: Number of Courses Supporting Each Competency

Number of Courses Supporting Each Competency

Competency	Fall 2013	Fall 2015	Fall 2016[7]	Fall 2017[8]
Written Communication [9]	1080	752	736	690
Oral Communication		224	227	224
Critical Thinking	1171	974	948	868
Cultural and Social Understanding	503	274	280	262
Information Literacy	902	606	600	562
Quantitative Reasoning	596	471	476	454
Scientific Reasoning	471	238	238	220
Personal Development			222	216

[7] Data provided as of August 18, 2016.
[8] Data provided as of January 4, 2017
[9] Written and Oral Communication were separated into two competencies on Official Course Outlines in fall 2015.

Appendix H: Timeline for Changes to Official TCC Course Outlines

Timeline for Changes to *Official TCC Course Outlines*

August	Elected discipline Faculty Facilitator begins his or her term. Substantial changes recommended by the Curriculum Committee in February and approved by the VP for Student Learning and CAO are activated in i-INCURR. Minor changes to the Official Course Outline (from the previous year) recommended by Discipline Faculty and assigned Dean/Director and approved by CAO are activated for fall semester. Fall semester Discipline Meetings (dates to be determined) – any substantial changes to the Official Course Outline need to be presented by Discipline Faculty at this time to the Faculty Facilitator. Substantial changes are those defined by the Curriculum Committee as such.
September	Any new minor changes to the Official Course Outline approved by discipline Faculty and assigned Dean/Director will be entered into i-INCURR by the assigned Dean/Director. September – May 15 Substantial changes to the Official Course Outline presented in the fall discipline meetings are forwarded to the assigned academic Dean/Director for action. If recommended by the academic Dean/Director, the changes are forwarded to the Office of Academic Services for review and sent to the chair of the Curriculum Committee for action. Recommended substantive changes are forwarded to the VP of Student Learning and CAO for action. In all cases, requests for substantive changes must be submitted to the Curriculum Committee in time for their February meeting in order to provide time for the committee's action.
February	The Curriculum Committee will act on the Substantial changes to the Official Course Outlines presented in the fall semester (to include January). Substantial changes recommended by the Curriculum Committee in February are forwarded to the VP for action and, if approved, made live in i-INCURR effective on August 1. Any substantial changes to the Official Course Outline that are not recommended by the Curriculum Committee or the VP must be resolved no later than the April Curriculum Committee meeting since the Committee does not meet during the summer.
April	Discipline Faculty Facilitators will be elected as needed for the next academic year.
May	Recommended minor changes to the Official Course Outline must be entered in i-INCURR by May 15 for eventual review and / or approval by the CAO for an August 1 effective date.
Summer	May – July substantial changes as well as any minor changes from the summer term will be presented by discipline faculty to the Faculty Facilitator during the Fall semester Discipline Meetings.

Appendix I: Authentic Assignment Tool

To complete this form electronically, save as "[Your Last Name] AAT", close, reopen, complete form, save, close. Or, print the blank form to complete by hand.

General Education Assessment (GEA) Authentic Assignment Tool (AAT)

Competency: Written Communication

Faculty Name: **Course:** **Date:**

STEP 1 **Read the Written Communication Rubric (pages 2-4.)**

STEP 2 **Identify an authentic assignment[1] required in your course which directs students to provide detailed/substantial demonstrations of all the learning outcome dimensions identified in the Written Communication Rubric[2].** Direct questions to Jennifer Ferguson at jferguson@tcc.edu. Online resources such as sample assignments are available through the General Education Assessment Resource System (GEARS), created for faculty by the Tidewater Community College Instruction Committee at www.tcc.edu/GEARS.

Title of Assignment(s):

Due Date(s) for Students:

STEP 3 **Provide the requested information on pages 5-8.**

STEP 4 **By 9/27/17, email the following to mdegaraff@tcc.edu[3] :**

a. **Completed AAT form, and**
b. **Separate document(s) containing the assignment instructions as provided to students for the assignment(s) identified on pages 5-7 of the AAT form.**

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[1] Authentic Assignments require students to apply standard-driven knowledge and skills to real-world challenges by demonstrating understanding through active use of the material. For example, Authentic Assignments may direct students to construct, perform, analyze, synthesize, and/or apply concepts and/or skills. * **Multiple choice, true/false, matching, fill in the blank, and group assignments may not be used in the GEA.**

[2] If you do not require an assignment which prompts students to demonstrate all dimensions of the rubric, you may revise an existing assignment, create a new assignment, or identify multiple assignments which in combination comprehensively support the rubric.

[3] Hard copies may be sent via campus mail to Jennifer Ferguson, Suite 623, Green Building, District, Norfolk or faxed to Jennifer at 757.822.1060.

1

Learning Outcome Dimension	Capstone 4 (Exemplary)	Milestones 3 (Proficient)	Milestones 2 (Developing)	Benchmark 1 (Emerging)
Context of and Purpose for Writing *Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).*	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).
Assignment Support: Specify how your assignment prompts students to demonstrate this learning outcome dimension.				
Expected Score: On average, what level of performance do you expect your students to demonstrate on this dimension? ◯ 4 (Exemplary) ◯ 3 (Proficient) ◯ 2 (Developing) ◯ 1 (Emerging) ◯ NA (Assignment does not require dimension)[4]				

Learning Outcome Dimension	Capstone 4 (Exemplary)	Milestones 3 (Proficient)	Milestones 2 (Developing)	Benchmark 1 (Emerging)
Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
Assignment Support: Specify how your assignment prompts students to demonstrate this learning outcome dimension.				
Expected Score: On average, what level of performance do you expect your students to demonstrate on this dimension? ◯ 4 (Exemplary) ◯ 3 (Proficient) ◯ 2 (Developing) ◯ 1 (Emerging) ◯ NA (Assignment does not require dimension)[4]				

[4] Support each dimension of the rubric through one or more assignments. Adapt existing or create new assignments as necessary.

5

Learning Outcome Dimension	Capstone 4 (Exemplary)	Milestones 3 (Proficient)	Milestones 2 (Developing)	Benchmark 1 (Emerging)
Genre and Disciplinary Conventions *Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).*	Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices.	Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices.	Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation.	Attempts to use a consistent system for basic organization and presentation.
Assignment Support: Specify how your assignment prompts students to demonstrate this learning outcome dimension.				
Expected Score: On average, what level of performance do you expect your students to demonstrate on this dimension? ◯ 4 (Exemplary) ◯ 3 (Proficient) ◯ 2 (Developing) ◯ 1 (Emerging) ◯ NA (Assignment does not require dimension)[5]				

Learning Outcome Dimension	Capstone 4 (Exemplary)	Milestones 3 (Proficient)	Milestones 2 (Developing)	Benchmark 1 (Emerging)
Sources and Evidence	Demonstrates skillful use of high- quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
Assignment Support: Specify how your assignment prompts students to demonstrate this learning outcome dimension.				
Expected Score: On average, what level of performance do you expect your students to demonstrate on this dimension? ◯ 4 (Exemplary) ◯ 3 (Proficient) ◯ 2 (Developing) ◯ 1 (Emerging) ◯ NA (Assignment does not require dimension)[5]				

[5] Support each dimension of the rubric through one or more assignments. Adapt existing or create new assignments as necessary.

6

Learning Outcome Dimension	Capstone 4 (Exemplary)	Milestones 3 (Proficient)	Milestones 2 (Developing)	Benchmark 1 (Emerging)
Control of Syntax and Mechanics	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.
Assignment Support: Specify how your assignment prompts students to demonstrate this learning outcome dimension.				
Expected Score: On average, what level of performance do you expect your students to demonstrate on this dimension? ◯ 4 (Exemplary) ◯ 3 (Proficient) ◯ 2 (Developing) ◯ 1 (Emerging) ◯ NA (Assignment does not require dimension)[6]				

[6] Support each dimension of the rubric through one or more assignments. Adapt existing or create new assignments as necessary.

7

Instructor's Narrative - In a brief narrative, summarize how your course supports the Written Communication competency:

8

Appendix J: Consultant Recommendations from Spring 2014

Linda Suskie, an internationally recognized assessment and accreditation consultant, provided the following recommendations which are the combination of her own thoughts with the "big ideas" faculty shared during the closing session of the spring 2014 *Learning Institute*:

- Work with other VCCS colleges to simplify the system's general education goals and learning outcomes.
- Focus on the VCCS general education goals rather than the student learning outcomes and prioritize the student learning outcomes.
- Develop a curriculum map aligning each VCCS general education goal with courses which satisfy each general education requirement.
- Revise the VALUE Rubrics for better alignment with the VCCS general education goals.
- Develop a process to offer further guidance and feedback to faculty on the assignments they develop to help students achieve and demonstrate the VCCS general education goals.
- Develop a timeline for deliverables (revised assignments, curriculum maps, and revised rubrics) to continue the momentum of the *Learning Institute*.
- Continue to offer professional development on teaching, grading, and assessment practices.
- Continue to foster interdisciplinary collaboration on designing learning experiences.
- Research e-portfolios.

Appendix K: Rater Agreement by Rubric Description

Fall 2015 General Education Assessment
Rater Agreement by Rubric Description

Oral Communication

Rubric Description	Rater Score Agreement*	Students Evaluated	Percent
1-Organization	Yes	61	78.2%
	No	17	21.8%
Total		***78***	***100.0%***
2-Language	Yes	71	91.0%
	No	7	9.0%
Total		***78***	***100.0%***
3-Delivery	Yes	66	84.6%
	No	12	15.4%
Total		***78***	***100.0%***
4-Central Message	Yes	69	88.5%
	No	9	11.5%
Total		***78***	***100.0%***
5-Supporting Material	Yes	45	57.7%
	No	33	42.3%
Total		***78***	***100.0%***

*Rater agreement is set to 'No' if the difference in the first and second raters' scores was greater than 1 or a score of 'not applicable' was assigned by one rater only (first or second rater)

Fall 2015 General Education Assessment
Rater Agreement by Rubric Description

Cultural and Social Understanding

Rubric Description	Rater Score Agreement*	Students Evaluated	Percent
1-Knowledge - Assess the impact that institutions have on individuals and culture	Yes	66	67.3%
	No	32	32.7%
Total		***98***	***100.0%***
2-Knowledge - Describes their own as well as others' personal ethical systems and values	Yes	52	53.1%
	No	46	46.9%
Total		***98***	***100.0%***
3-Skills - Recognize the impact that arts and humanities have upon individuals and cultures	Yes	69	70.4%
	No	29	29.6%
Total		***98***	***100.0%***
4-Skills - Recognize the role of language in social and cultural contexts	Yes	44	44.9%
	No	54	55.1%
Total		***98***	***100.0%***
5-Skills - Recognize interdependence of world-wide social, economic, geo-political, and cultural systems	Yes	55	56.1%
	No	43	43.9%
Total		***98***	***100.0%***

*Rater agreement is set to 'No' if the difference in the first and second raters' scores was greater than 1 or a score of 'not applicable' was assigned by one rater only (first or second rater)

Spring 2016 General Education Assessment
Rater Agreement by Rubric Description

Personal Development

Rubric Description	Rater Score Agreement*	Students Evaluated	Percent
1-Personal Wellness	Yes	55	58.5%
	No	39	41.5%
Total		***94***	***100.0%***
2-Decision-Making	Yes	46	48.9%
	No	48	51.1%
Total		***94***	***100.0%***
3-Academic and Professional Goal-Setting	Yes	47	50.0%
	No	47	50.0%
Total		***94***	***100.0%***
4-Social and Interpersonal Development	Yes	53	56.4%
	No	41	43.6%
Total		***94***	***100.0%***
5-Personal Identity	Yes	45	47.9%
	No	49	52.1%
Total		***94***	***100.0%***

*Rater agreement is set to 'No' if the difference in the first and second raters' scores was greater than 1 or a score of 'not applicable' was assigned by one rater only (first or second rater)

Fall 2016 General Education Assessment
Rater Agreement by Rubric Description

Critical Thinking

Rubric Description	Rater Score Agreement*	Students Evaluated	Percent
1-Explanation of Issues	Yes	135	69.9%
	No	58	30.1%
Total		***193***	***100.0%***
2-Evidence	Yes	125	64.8%
	No	68	35.2%
Total		***193***	***100.0%***
3-Influence of Context and Assumptions	Yes	132	68.4%
	No	61	31.6%
Total		***193***	***100.0%***
4-Student's Position - Perspective, Thesis/Hypothesis	Yes	137	71.0%
	No	56	29.0%
Total		***193***	***100.0%***
5-Conclusions and Related Outcomes	Yes	138	71.5%
	No	55	28.5%
Total		***193***	***100.0%***
6-Solving Problems	Yes	98	50.8%
	No	95	49.2%
Total		***193***	***100.0%***

*Rater agreement is set to 'No' if the difference in the first and second raters' scores was greater than 1 or a score of 'not applicable' was assigned by one rater only (first or second rater)

Spring 2017 General Education Assessment
Rater Agreement by Rubric Description

Scientific Reasoning

Rubric Description	Rater Score Agreement*	Students Evaluated	Percent
1-Argument or Topic Selection	Yes	109	58.9%
	No	76	41.1%
Total		***185***	***100.0%***
2-Existing Knowledge, Research, and Views	Yes	114	61.6%
	No	71	38.4%
Total		***185***	***100.0%***
3-Methodology	Yes	131	70.8%
	No	54	29.2%
Total		***185***	***100.0%***
4-Analysis	Yes	141	76.2%
	No	44	23.8%
Total		***185***	***100.0%***
5-Conclusions, Limitations, and Implications	Yes	136	73.5%
	No	49	26.5%
Total		***185***	***100.0%***

*Rater agreement is set to 'No' if the difference in the first and second raters' scores was greater than 1 or a score of 'not applicable' was assigned by one rater only (first or second rater)

Fall 2017 General Education Assessment
Rater Agreement by Rubric Description

Written Communication

Rubric Description	Rater Score Agreement*	Students Evaluated	Percent
1-Context of and Purpose for Writing	Yes	179	83.6%
	No	35	16.4%
Total		***214***	***100.0%***
2-Content Development	Yes	176	82.2%
	No	38	17.8%
Total		***214***	***100.0%***
3-Genre and Disciplinary Conventions	Yes	177	82.7%
	No	37	17.3%
Total		***214***	***100.0%***
4-Sources and Evidence	Yes	149	69.6%
	No	65	30.4%
Total		***214***	***100.0%***
5-Control of Syntax and Mechanics	Yes	181	84.6%
	No	33	15.4%
Total		***214***	***100.0%***

*Rater agreement is set to 'No' if the difference in the first and second raters' scores was greater than 1 or a score of 'not applicable' was assigned by one rater only (first or second rater).