TALLAHASSEE COMMUNITY COLLEGE

# QEP Student Performance Report: Year 2

## Office of Institutional Effectiveness

**July 26, 2016**

# QEP Student Performance Report: Year 2

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This report provides the results for two Quality Enhancement Plan (QEP) assessment questions that are related to student performance in the area of digital literacy.

1. What is the level of digital readiness of our First Time in College (FTIC) students?
2. To what extent are students achieving the digital literacy learning outcomes?
3. What impact has the QEP had on students' digital literacy skills and how does their performance compare to a reference group of student from other institutions?

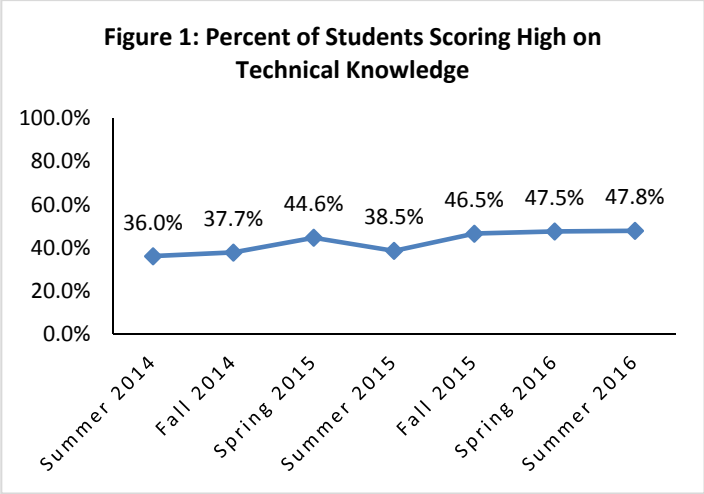
## Question 1: What is the level of digital readiness of our FTIC students?

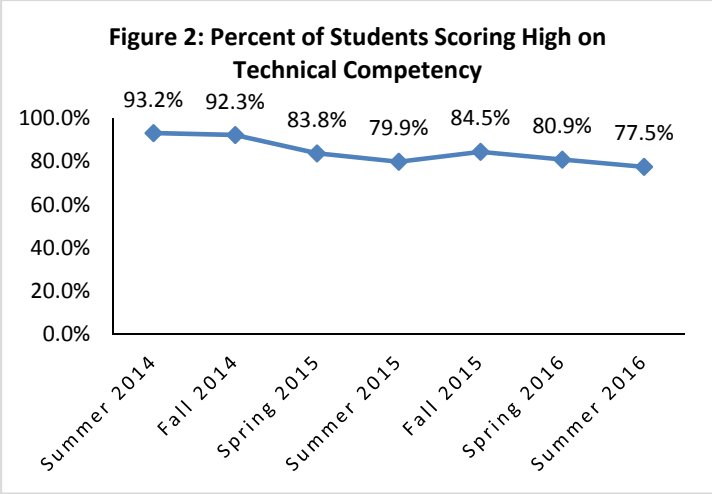
Students' digital readiness is assessed by SmarterMeasure, an online assessment that addresses two areas related to digital literacy: Technical Knowledge and Technical Competency. SmarterMeasure previously assessed digital literacy through addressing Typing Skills, but this area is no longer a part of the assessment. ***Table 1*** displays the number of FTIC students who completed SmarterMeasure from Summer 2014 through Summer 2016. Descriptions of the Technical Knowledge and Technical Competency subtests are available in ***Appendix A***.

**Table 1. Number of students included in data for each term.**

| Term | Number of Students |
|---|---|
| Summer 2014 | 601 |
| Fall 2014 | 567 |
| Spring 2015 | 107 |
| Summer 2015 | 369 |
| Fall 2015 | 101 |
| Spring 2016 | 162 |
| Summer 2016 | 470 |

Assessment results indicate that students' Technical Competency (***Figure 2***) is superior to their Technical Knowledge (***Figure 1***). While the percentage of students who scored "high" on Technical Knowledge fluctuated from Summer 2014 to Summer 2015, they have remained stable at about 47% from Fall 2015 to Summer 2016. However, across all terms, fewer than 50% of students achieved high scores. Technical Competency performance has decreased slightly over time; however over 75% of TCC students are consistently performing at a high level.




## Question 2: To what extent are students achieving the digital literacy learning outcomes?

Student attainment of the learning outcomes identified in the Quality Enhancement Plan (QEP) was measured by faculty who taught courses intended to improve digital literacy. The College's Common Digital Literacy Rubric was used to assess student assignments. The rubric, which has a 5-point scale for each learning outcome, is available in ***Appendix B***. The initial target for student achievement was that 70% of students would score a 3 or higher on each outcome. The learning outcomes are:

- Students will be able to find and utilize digital tools.
- Students will be able to use digital tools to create content.
- Students will be able to use digital tools to share content.

In Spring 2015, digital literacy scores were submitted for 268 students enrolled in 12 sections of 8 courses. In Summer 2015, 187 student scores were submitted from 11 sections of 9 courses. In Fall 2015, the sample size grew to 72 sections of 43 courses, comprised of 1,402 students. This trend continued into Spring 2016, wherein scores were submitted for 2,049 students from 84 sections of 40 courses. ***Table 2*** depicts the sample size and number of faculty, courses and sections included from each term.

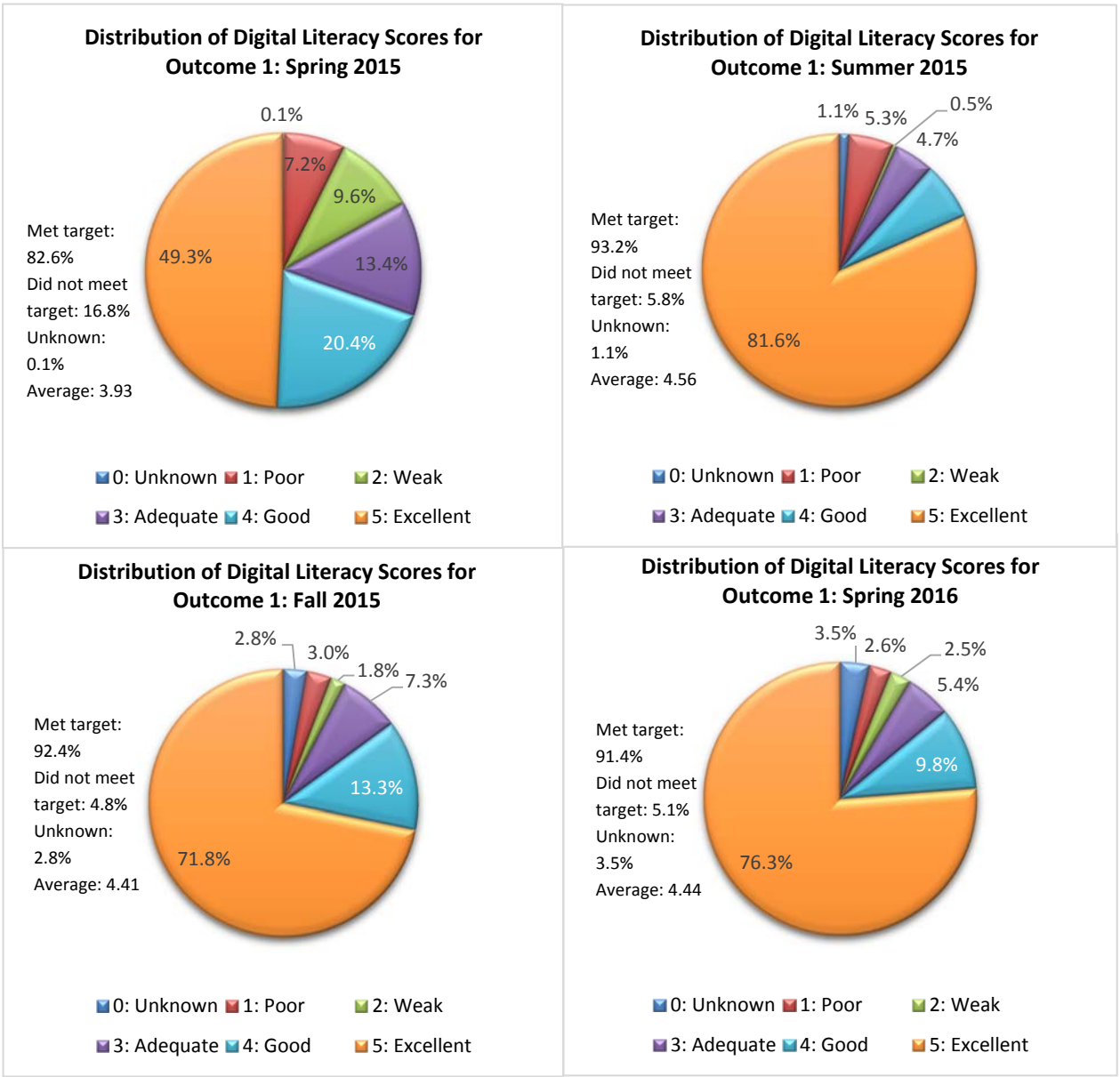
**Table 2. Number of Faculty, Divisions, Courses, Sections, and Students Sampled in Each Term.**

| Term | Number of Faculty | Number of Academic Divisions | Number of Courses | Number of Course Sections | Number of Students |
|---|---|---|---|---|---|
| Spring 2015 | 4 | 2 | 8 | 12 | 268 |
| Summer 2015 | 7 | 5 | 9 | 11 | 187 |
| Fall 2015 | 32 | 6 | 43 | 72 | 1,402 |
| Spring 2016 | 40 | 6 | 40 | 84 | 2,049 |

## *Digital Focus Learning Outcome 1: Find, Operate, and Utilize Digital Tools*

The first QEP learning outcome assessed is the ability to find, operate, and utilize digital tools for professional purposes. ***Figure 3*** depicts the distributions of student performance on this learning outcome in each term. The initial target for student achievement was that 70% of students would score a 3 or higher in all digital literacy areas. More than 80% of students demonstrated adequate performance (a score of 3) or higher in finding, operating, and utilizing digital tools during each semester. The highest percentage of students did not meet the target score in Spring 2015 (16.8%). Less than 6% did not meet the target score in the remaining semesters. The lowest average score was observed in Spring 2015. Average scores for each subsequent semester are in the 4.41 to 4.56 range with the highest average occurring in Summer 2015. The percentage of students with scores of 0 has increased since Spring 2015 when 0.1% of students were given a score of 0 to Spring 2016 when 3.5% were given a score of 0. It is unclear whether zeros were assigned to students because they did not demonstrate any level of competency, or because they did not submit the assignment.

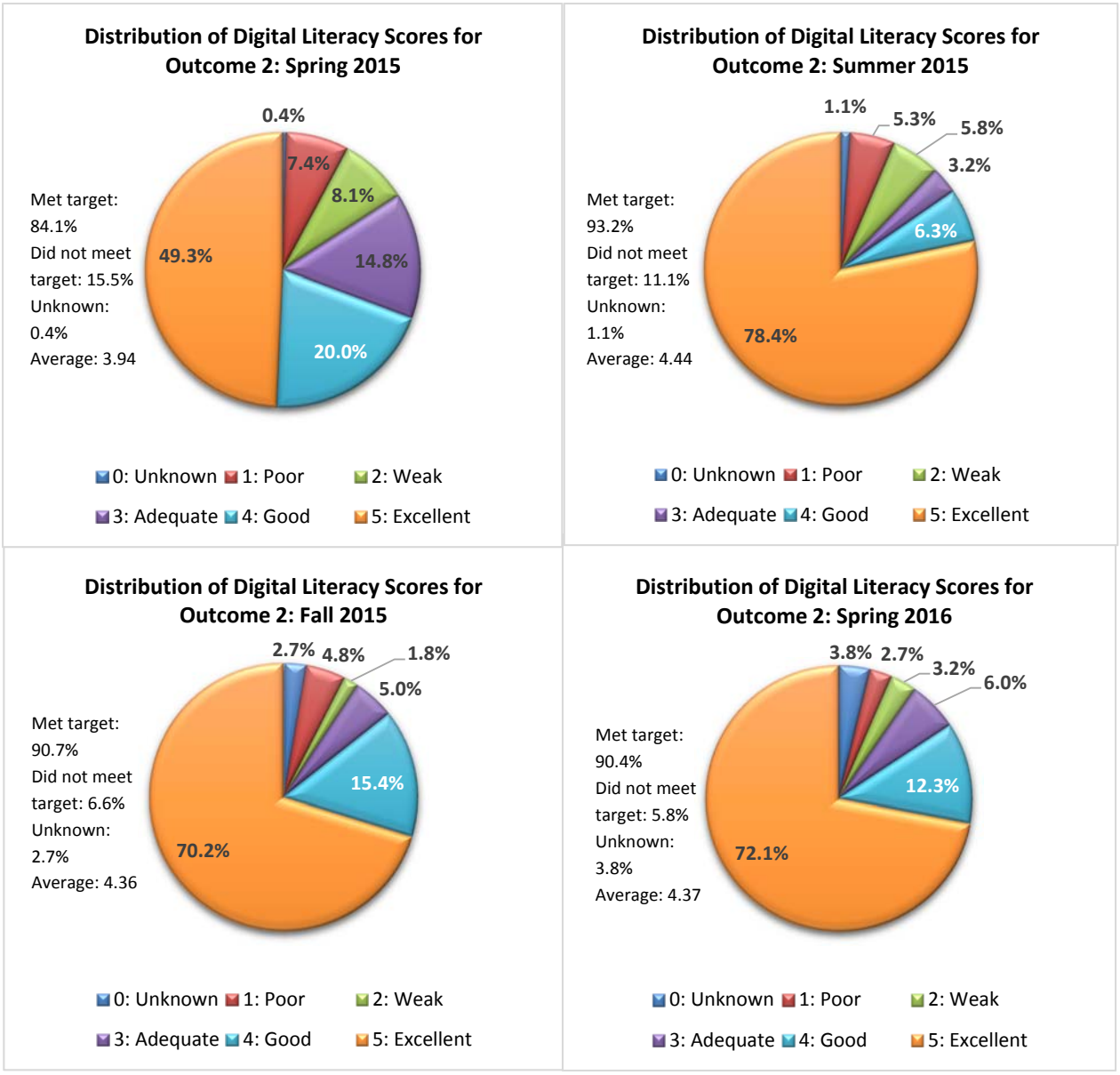
**Figure 3. Distribution of Digital Literacy Scores for Outcome 1 from Spring 2015-Spring 2016**



## *Digital Focus Learning Outcome 2: Use Digital Tools to Create Content*

The second QEP learning outcome assessed is the ability to use digital tools to create content. ***Figure 4*** depicts the distributions of students' digital literacy in using digital tools to create content in each term. The initial target for student achievement was that 70% of students would score a 3 or higher in all digital literacy areas. More than 80% of students demonstrated literacy this area for each semester. The highest percentage of students did not meet the target score (3 or above) in Spring 2015 (15.5%). In Summer 2015, 11.1% of students did not meet the target score. Less than 7% did not meet the target score in Fall 2015 and Spring 2016. The lowest score average score was observed in Spring 2015, while the average scores for subsequent semesters ranged from 4.36 to 4.44. The percentage of students with scores of 0 has increased since Spring 2015 when only 0.4% of students had a 0 score to Spring 2016 when 3.8% were given a 0 score by their professor. It is unclear whether zeros were assigned to students because they did not demonstrate competency, or because they did not submit the assignment.

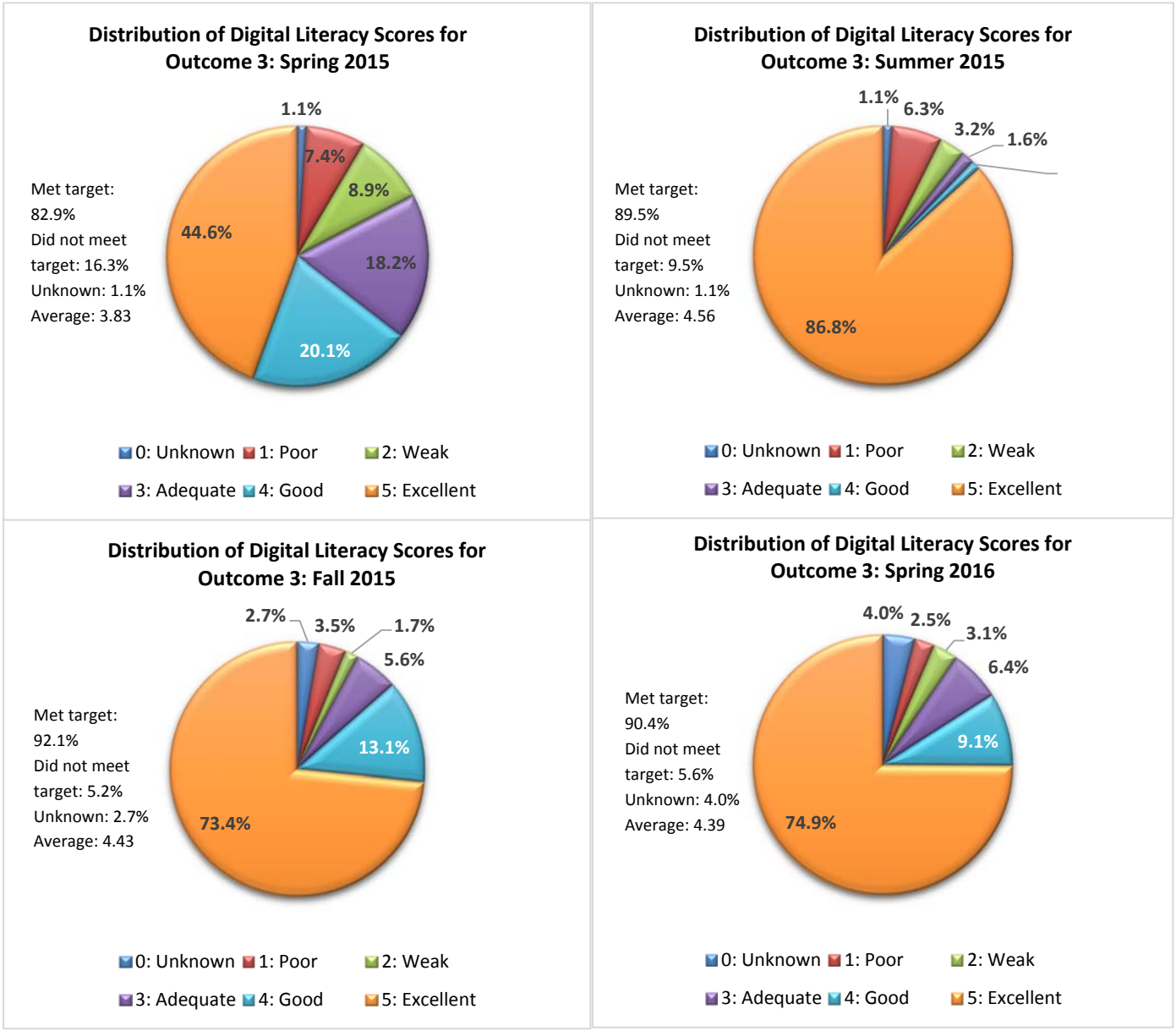
**Figure 4. Distribution of Digital Literacy Scores for Outcome 2 from Spring 2015-Spring 2016**



## *Digital Focus Learning Outcome 3: Use Digital Tools to Share Content*

The third QEP learning outcome assessed through the rubric is the ability use digital tools to share content effectively. ***Figure 5*** depicts the distributions of students' digital literacy performance on this learning outcome in each term. The initial target for student achievement was that 70% of students would score a 3 or higher in all digital literacy areas. More than 80% of students demonstrated literacy this area in each semester. The highest percentage of students did not demonstrate digital literacy in this area (scores below 3) in Spring 2015 (16.3%). In Summer 2015, 9.5% of students did not meet the target score. Less than 6% of students in Fall 2015 and Spring 2016 did not meet the target score. The lowest mean score was in Spring 2015. Averages for the remaining semesters range from 4.39 to 4.56. As was the case with the first two learning outcomes, the percentage of students who were given a score of 0 increased from 1.1% in Spring 2015 to 4.0% in Spring 2016. It is unclear whether zeros were assigned to students because they did not demonstrate competency, or because they did not submit the assignment.

**Figure 5. Distribution of Digital Literacy Scores for Outcome 2 from Spring 2015-Spring 2016.**



## Question 3: What impact has the QEP had on students' digital literacy skills and how does their performance compare to a reference group of students from other institutions?

The ETS iSkills Assessment was administered to students enrolled in sections of four courses (ENC 0025, ENC 1101, CGS 1030, CGS 1060) during Spring 2015 and Spring 2016. The courses were chosen for iSkills administration because they are typically taken by FTIC students. Data from the two administrations are serving as "pre-assessments" of FTIC students' digital literacy skills. In Spring 2017 and Spring 2018, the iSkills Assessment will be administered to students enrolled in courses that are typically taken by students at the end of their academic careers at TCC, thereby allowing the College to assess the impact of the QEP on students' digital literacy skills.

In Spring 2015, iSkills was administered to 249 students. Valid results were available for 168 students. In Spring 2016, iSkills was administered to 232 students. Valid results were available for 133 students. ***Figure 6*** displays the 2015 percentage of TCC test-takers who achieved the highest score on iSkills areas related to TCC's definition of digital literacy relative to the reference group provided by iSkills. Assessment results indicate that TCC students scored 11 to 16 percentage points below the reference group. ***Figure 7*** displays the 2016 percentage of TCC test-takers who achieved the highest score on iSkills areas related to TCC's definition of digital literacy relative to the reference group provided by iSkills. Assessment results indicate that TCC students scored 15 to 20 percentage points below the reference group.

**Figure 6: Percent of Test-Takers who Achieved the Highest Score by iSkills Skill Area: Spring 2015**

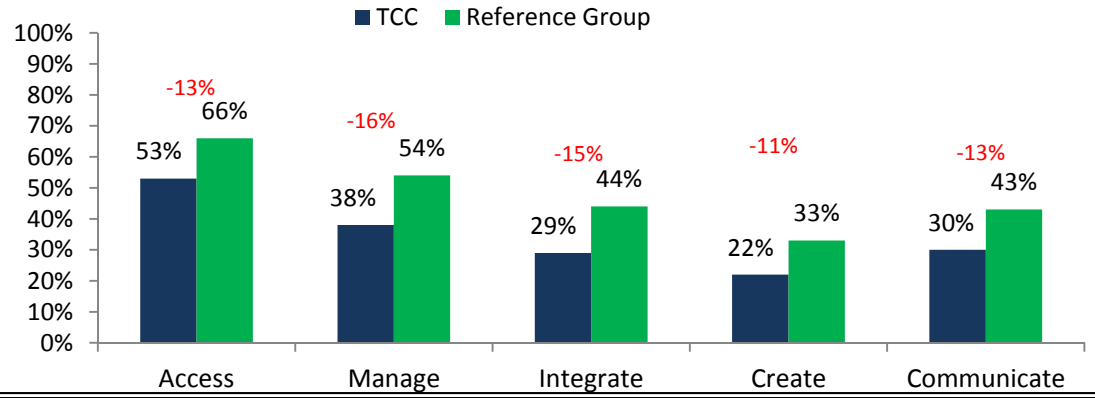
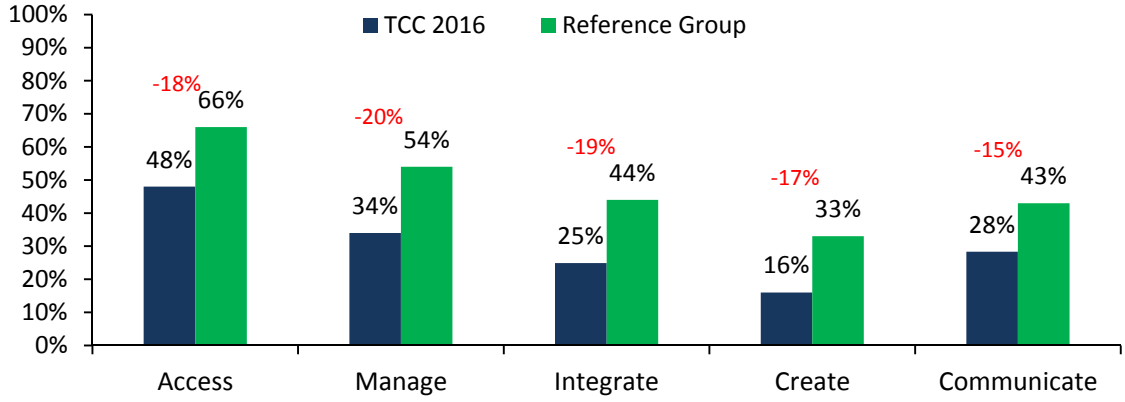



**Figure 7: Percent of Test Takers who Achieved the Highest Score by iSkills Skill Area: Spring 2016**




***Definitions for iSkills Skill areas and descriptions of assessment tasks are available in Appendix B.**

The area of greatest weakness for both TCC and the reference group is Create (adapting, applying, designing or constructing information in digital environments). Both groups scored highest in the area of Access (collecting and/or retrieving information in digital environments).

***Table 3*** displays the percent of TCC students who had a high score on assessment tasks by skill area for each year. Overall, students performed best on using a database to respond to an inquiry. They were weakest in organizing emails and identifying those that required later action.

**Table 3: Percent of TCC Students Scoring High on Assessment Tasks for Digital Literacy Skill Areas**

| Skill Area | Assessment Task | Percent of TCC Students with a High Score: 2015 | Percent of TCC Students with a High Score: 2016 |
|---|---|---|---|
| Access | Search a store's database in response to a customer's inquiry | 68% | 65% |
| Access | Install a video player in order to download a video file | 38% | 30% |
| Manage | Fill in an organizational chart to reflect the structure of a new business | 54% | 52% |
| Manage | Place e-mails into correct folders and identify those requiring later action | 14% | 6% |
| Integrate | Combine several electronic suggestions in order to plan a scientific experiment | 31% | 23% |
| Integrate | Complete a table comparing potential checking accounts according to specific criteria | 26% | 27% |
| Create | Create a slide for group presentation | 25% | 18% |
| Create | Create a data display | 17% | 13% |
| Communicate | Select the best way to advertise products to users of an electronic mailing list | 39% | 39% |
| Communicate | Make a slide arguing a position on telecommuting based on information presented in an e-mail | 18% | 14% |

***Figures 8*** through ***17*** display test-takers performance on assessment tasks related to each skill area in Spring 2015 and Spring 2016. Assessment results indicate there is room for improvement for both TCC students and the Reference Group. However, TCC students' performance levels are lower than the Reference Group's performance across all assessment tasks. Gaps ranged from 5 percentage points to 25 percentage points.

## Access

**Figure 8: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Access: Spring 2015**

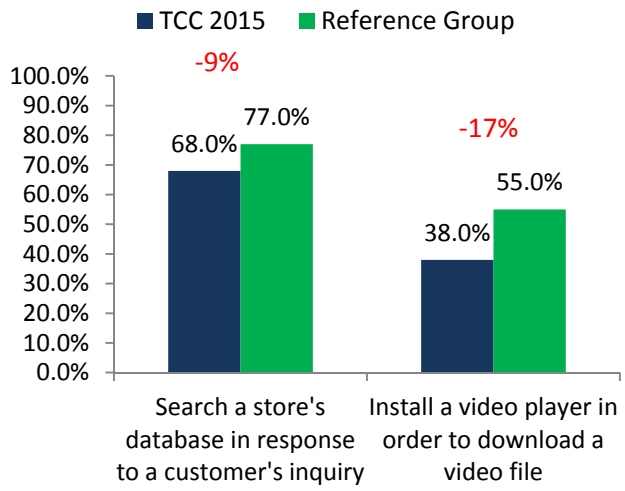
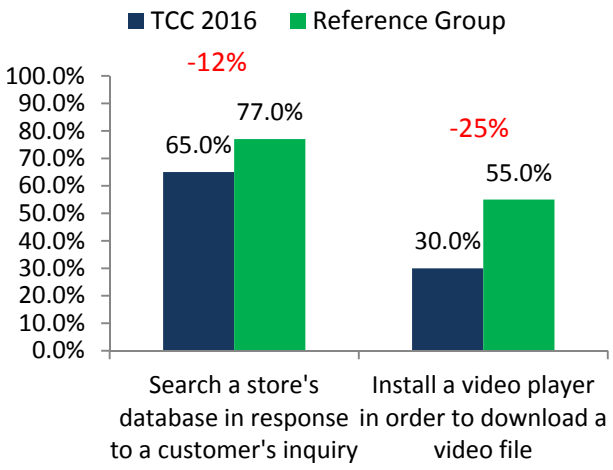



**Figure 9: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Access: Spring 2016**




## Manage

**Figure 10: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Manage: Spring 2015**

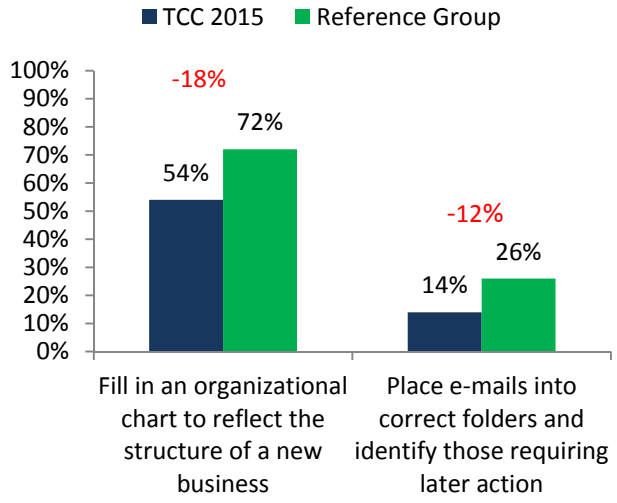
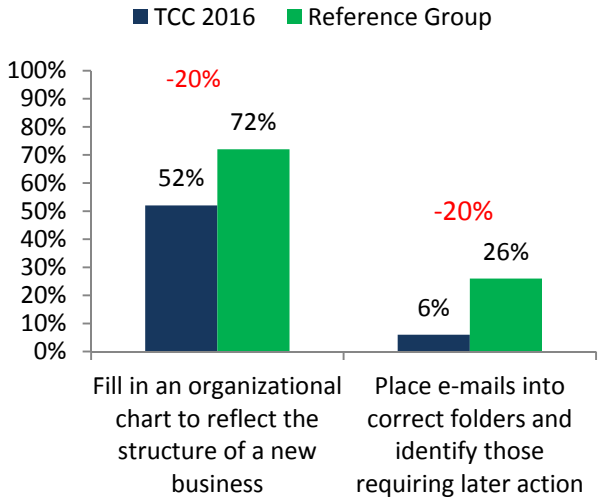



**Figure 11: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Manage: Spring 2016**



## Integrate

**Figure 12: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Integrate: Spring 2015**

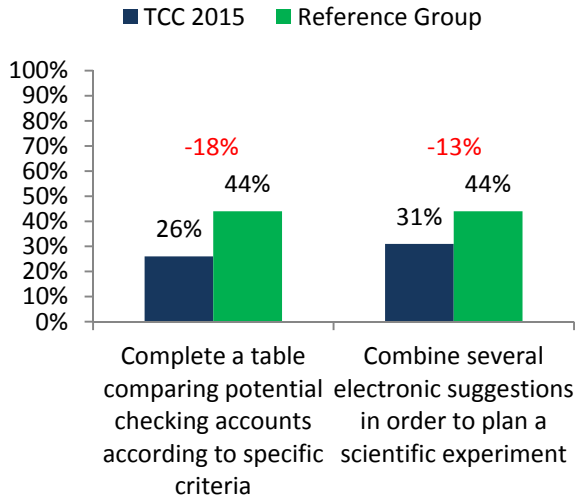
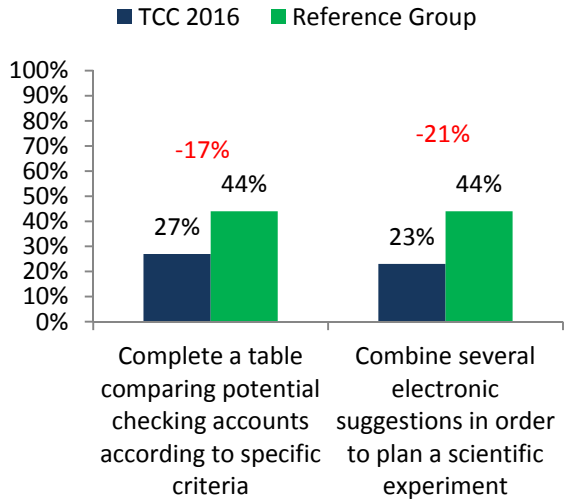



**Figure 13: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Integrate: Spring 2016**




## Create

**Figure 14: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Create: Spring 2015**

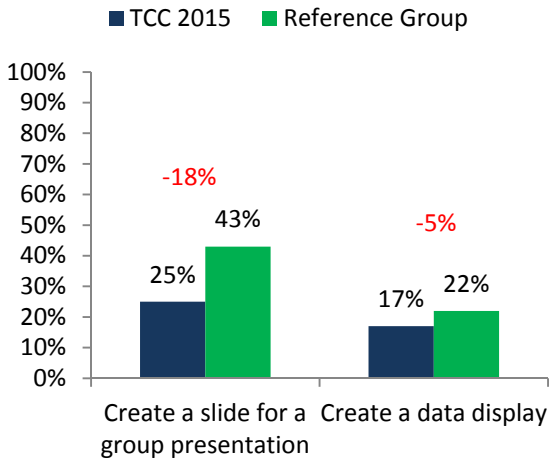
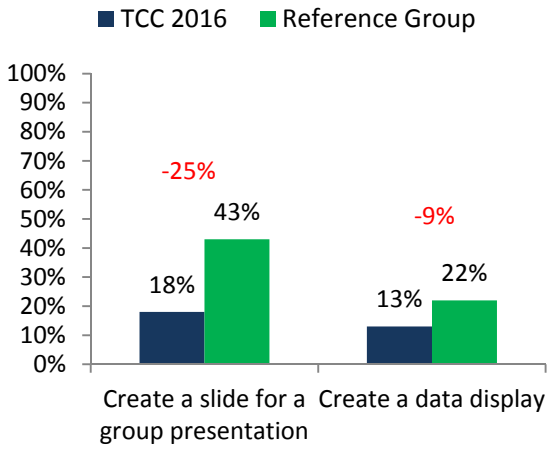



**Figure 15: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Create: Spring 2016**



## Communicate

**Figure 16: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Communicate: Spring 2015**

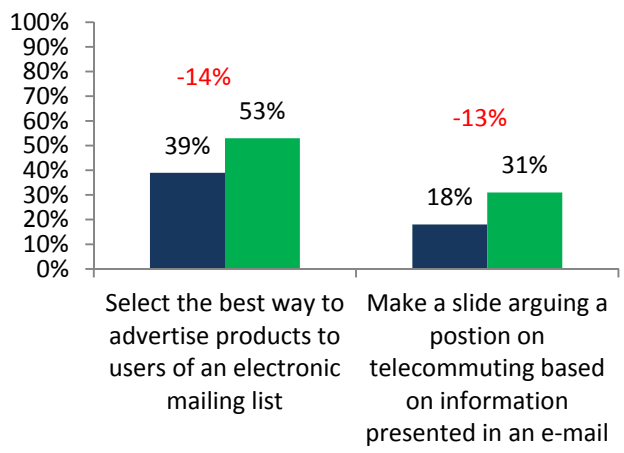
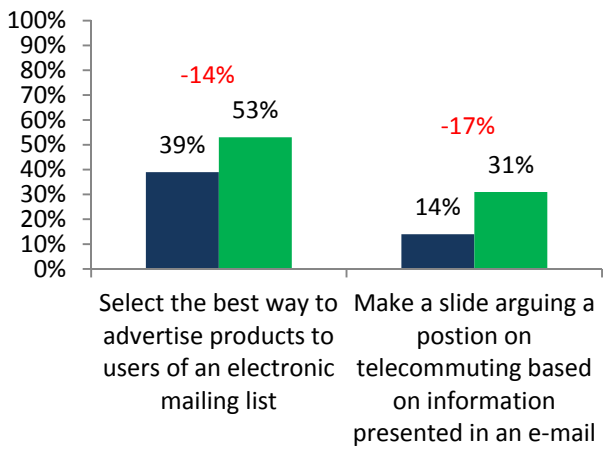



**Figure 17: Percent of Test-Takers Who Scored High on Assessment Tasks Related to Communicate: Spring 2016**




## Conclusions and Points for Consideration

Results from the three assessments indicate there are opportunities for improving students' digital literacy skills. The assessment results lead to the following conclusions and points for consideration:

***Question 1: What is the level of digital readiness of our FTIC students?***

The SmarterMeasure pre-assessment suggests that a vast majority of students are performing well in terms of their Technical Competency. However, a majority of students would benefit from opportunities to improve their Technical Knowledge. The QEP Committee may want to work with the Learning Commons to ensure students have access to basic computer literacy and keyboard skills outside of the College's computer literacy courses (CGS 1030-Computer Basics; CGS 1060-Computer and Internet Literacy). If these student support mechanisms already exist, faculty could refer students to the Learning Commons for computer training or "skills refreshing" in these basic areas of digital competency if they find that their students are deficient.

***Question 2: To what extent are students achieving the digital literacy learning outcomes?***

The overwhelming majority of students have demonstrated attainment of the QEP's three learning outcomes as defined by a score of 3 or higher on the digital literacy rubric. Given the fact that the College has exceeded its achievement target on all three learning outcomes, the QEP Committee should consider the following points:

- Increase the achievement target on the rubric from a 3-Adequate to a 4-Better. Next, work with colleagues to identify how to move students from a 3-Adequate performance level to a 4-Better.

- Identify how to make the digital literacy assignments more challenging so that students have an opportunity to learn more complex skills in the area of digital literacy.
- Finally, a review of the distribution of scores indicates that anywhere from 0.4% to 4.4% of students earned scores of 0 on the learning outcomes assessed by the rubric. It is not clear what guidelines were followed by faculty members who assigned these scores.

***Question 3: What impact has the QEP had on students' digital literacy skills and how does their performance compare to a comparison group of student from other institutions?***

Data will not be available to assess the impact of the QEP on students' digital literacy skills until Spring 2017 and Spring 2018; however, current data indicates that TCC students are not performing at the same level as the iSkills Reference Group. TCC students' scores have declined slightly since Spring 2015, and the gaps between TCC students and the iSkills Reference Group have grown. One can, therefore, conclude that there are opportunities to improve students' digital literacy skills. The skills covered by the ETS iSkills assessment instrument should be compared to those required by the College's local assignments/assessment to ensure that students have an opportunity to attain skills that will facilitate their performance on iSkills tasks.

## Appendix A
## Description of SmarterMeasure Subtests Related to Digital Literacy

**Technical Competency**

- The technical competency section of SmarterMeasure measures the degree to which the participant possesses basic instructional technology skills. In this section students demonstrate mastery of the technology skills through ten technology related tasks. The tasks are identifying a properly formatted email address, following a link on a web page, opening a file, identifying an appropriate software application for a specific task, downloading and listening to an audio file, working within a file structure, identifying an email attachment, saving a file, printing a file, and using a search engine. Mastery of the tasks is assessed through ten multiple choice and fill-in-the-blank questions.

**Technical Knowledge**

- The technical knowledge section of SmarterMeasure measures the degree to which the participant possesses knowledge of items related to instructional technology. In this section there are seven technology usage items which measure the degree to which the participant uses specified instructional technologies. This item is measured through multiple choice items containing four choices. The technology in your life section contains two items through which the participant indicates the level at which they integrate technology into other areas of their life. This section is measured through a dropdown menu of numerical choices which indicate the appropriate frequency of the technology integration. The technology vocabulary section contains ten items which are measured by four-choice multiple choice questions. The personal computer / Internet specification section contains four items and allows the student to report facts about the primary computer and Internet connection which they will be using to participate in their courses.

## Appendix B

## Digital Literacy Rubric

A digital literacy rubric was developed by the QEP Assessment Subcommittee to be used as a common assessment tool for faculty to use across the academic curriculum. This rubric was designed to tease out the fundamental student learning outcomes common to robust use of digital technology across disciplines and modalities. The rubric can be used to measure student achievement in the three identified learning outcomes of digital literacy.

| Student Learning Outcome | Focus 1: Students find, operate and utilize digital tool(s) for academic and Professional Purposes | Focus 2: Students use digital tool(s) to create content | Focus 3: Students use digital tool(s) to share content effectively |
|---|---|---|---|
| **Excellent: 5** | Uses the most relevant digital tool(s) expertly | Uses digital tool(s) expertly to create, modify, and manage content | Uses digital tool(s) expertly to share and communicate content effectively |
| **Good: 4** | Uses relevant digital tool(s) effectively | Uses digital tool(s) effectively to create, modify, and manage content | Uses digital tool(s) to share and communicate content effectively |
| **Adequate: 3** | Uses relevant digital tool(s) adequately with few mistakes or inconsistencies | Uses digital tool(s) adequately to create, modify, and manage content | Uses digital tool(s) adequately to share and communicate content |
| **Weak: 2** | Uses irrelevant digital tool(s) or uses relevant digital tool(s) ineffectively | Uses digital tool(s) ineffectively to create, modify, and manage content | Uses digital tool(s) ineffectively to share and communicate content |
| **Poor: 1** | Cannot determine or does not find, operate, or utilize digital tool(s) | Cannot determine or does not use digital tool(s) to create, modify, and manage content | Cannot determine or does not use digital tool(s) to share and communicate content |

## Appendix C
## Definitions of iSkills Skill Areas and Descriptions of Assessment Tasks Relevant to Each Skill Area

**Access** – Collect and/or retrieve information in digital environments. Information sources might be web pages, databases, discussion groups, emails or online descriptions of print media. Tasks include:

- Generating and combining search terms (keywords) to satisfy the requirements of a particular research task
- Efficiently browsing one or more resources to locate pertinent information
- Deciding what types of resources might yield the most useful information for a particular need

**Manage –** Organize information to help you or others find it later by:

- Categorizing emails into appropriate folders based on a critical view of the emails' contents
- Arranging personnel information into an organizational chart
- Sorting files, emails or database returns to clarify clusters of related information

**Integrate –** Interpret and represent information using digital tools to synthesize, summarize, compare and contrast information from multiple sources. Tasks include:

- Comparing advertisements, emails or websites from competing vendors by summarizing information into a table
- Incorporating information from different sources to conduct a scientific experiment and report the results
- Placing results from an academic or sports tournament into a spreadsheet to clarify standings and decide the need for playoffs

**Create –** Adapt, apply, design or construct information in digital environments by:

- Editing and formatting a document according to a set of editorial specifications
- Creating a presentation slide to support a position on a controversial topic
- Creating a data display to clarify the relationship between academic and economic variables

**Communicate –** Disseminate information tailored to a particular audience in an effective digital format by:

- Formatting a document to make it more useful to a particular group
- Transforming an email into a succinct presentation to meet an audience's needs
- Selecting and organizing slides for distinct presentations to different audiences
- Designing a flyer to advertise to a distinct group of users