

Developmental Achievement & Student Satisfaction Reports Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College's assessment measures for the Senate Bill 1720 plan include a collection of achievement data to determine the efficacy of the developmental options and to inform course and program improvement. Additionally, FSW tracks satisfaction of current developmental courses through a survey administered at the end of each term. The data is in support of assessment measures for the SB1720 plan to determine efficacy of developmental options and to inform course and program improvement. What follows is the assembly of achievement and student satisfaction reports for each of the three developmental courses (ENC 0022, REA 0019, and MAT 0057).

The faculty for ENC 0022 *Writing for College Success* defined a method of assessment for AY 2014-2015 and established baselines with the results.

The faculty for MAT 0057 *Mathematics for College Success* reviewed achievement to determine if there is any significant difference across developmental strategies (Compressed and Modularized).

The faculty for REA 0019 *Reading for College Success* defined a course outcome at the onset of AY 2014-2015 that students will read at a post-secondary level that correlates with college success by the completion of the Developmental Reading sequence. Faculty established 1) a goal of the mean score difference (pre-/post) test of the course mastery exam will improve significantly college wide, 2) a goal of the mean score difference (pre-/post) of the course mastery exam will improve significantly across developmental strategies (Compressed and Modularized), and 3) that 80% of REA 0019 completers will pass the course mastery exam for reading and complete the course with a 'C' or better.

- ❖ Section 1: ENC 0022 Common Course Assessment Report (includes ENC 1101 & 1102)
- ❖ Section 2: ENC 0022 Final (Mastery) Exam Assessment Report
- ❖ Section 3: ENC 0022 Survey Results Report
- ❖ Section 4: MAT 0057 Final (Mastery) Exam Assessment Report
- ❖ Section 5: MAT 0057 Survey Results Report
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Section 1

ENC 0022 Assessment Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Assessment

1 INTRODUCTION

In Fall 2014, the English Department of Florida SouthWestern State College (FSW) outlined an initial plan for assessment in three courses: English for College Success (ENC 0022), Composition I (ENC 1101), and Composition II (ENC 1102). For Summer 2015, assessment will include ENC 0022 only. At FSW, common course assessment is typically not conducted over the summer terms except in certain cases. A baseline Student Learning Objective (SLO) for ENC 0022 has been implemented based on the assessment results of Fall 2014 and will serve as a correlative measure for supporting assessment driven instruction going forward (Cole et al., 2011; Elder and Paul, 2007).

For additional detail or further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Director of Academic Assessment, Academic Affairs (jfvangaalen@fsw.edu; x16965).

2 DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES

It is expected that upon completion of ENC 0022 students will be able to plan and write paragraphs and essays reflecting styles and tones appropriate for their audience and use adequate support, coherence, and unity that demonstrate understanding of content for expository and persuasive purposes. To accomplish this, ENC 0022 is scored using a rubric with seven dimensions: Introductory Paragraph, Support Paragraphs, Organization, Concluding Paragraph, Grammar, Mechanics, and Research. Each dimension is scored on a scale of 1 to 4 (1-Unacceptable, 2-Needs work, 3-Average, 4-Above average), with 0s if the baseline of 'Unacceptable' is not met. Using this common rubric criterion as an assessment method and based on the results of the Fall 2014 assessment, the English department has established a benchmark (SLO1) measuring the percentage of artifacts scoring a 2 or greater.

During the summer 2015 semester, 24 total artifacts were recorded for ENC 0022. The mean overall score for the 24 artifacts is 19.7/28, or 70.4% (Table 1). The Research rubric dimension exhibits the lowest mean score (2.5). Additionally, just 12.5% of artifacts were scored at a 4. Achievement at level 4 in other dimensions range from 16.7% to 50.0% (Figure 1).

The benchmark measurement, SLO1, exhibits achievement at 2 or greater ranging from 83.3% (Research) to 95.8% (Supporting Paragraphs). Achievement at 3 or greater ranges from 45.8% (Research) to 91.7% (Organization). While the Grammar, Mechanics, and Research dimensions achievement at level 4 vary by 4.2%, their achievement at level 3 or greater varies by 25%. In the case of Organization, 91.7% achieved level 2 or higher as well as level 3 or higher (no one scored a 2). These varied distributions speak to the typical achievement patterns in various dimensions. For a more thorough review of these patterns, see Section 3.2.

	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research	Overall
mean	2.8	3.1	3.3	2.7	2.8	2.6	2.5	19.7
standard deviation	0.99	0.88	0.87	1.09	0.90	0.88	1.02	5.41
Rubric Dimension	%	%	%	%	%	%	%	
4	29	38	50	25	17	13	21	
3	25	38	42	38	54	46	25	
2	38	21	0	17	17	29	38	
1	8	4	8	21	13	13	17	
Benchmark Achievement	%	%	%	%	%	%	%	
3 or greater	54	75	92	63	71	58	46	
2 or greater	92	96	92	79	88	88	83	

Table 1. Basic descriptive statistics of summer 2015 ENC 0022 artifacts. Rubric dimensions are also shown with distribution of artifacts by rubric achievement level and by percentage scoring at benchmark levels (2 or greater & 3 or greater).

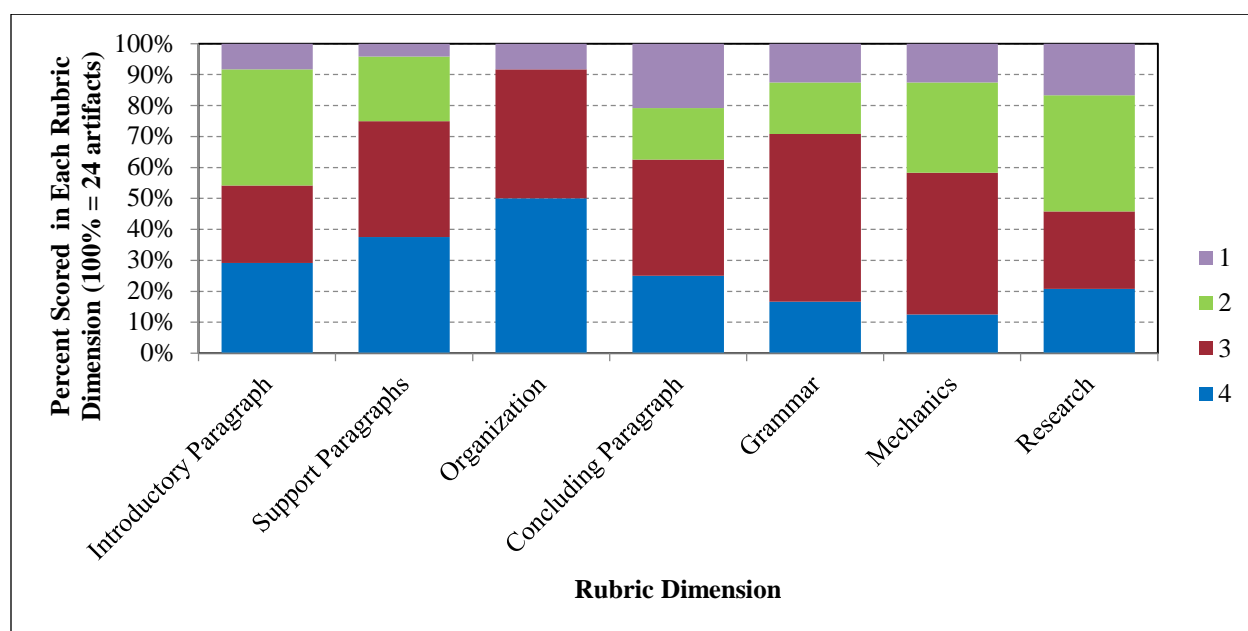


Figure 1. ENC 0022 distribution of rubric scores by dimension.

3 EXPLORATORY ANALYSIS & SIGNIFICANCE TESTING

3.1 COMPARISON BY SITE, FORMAT, OR STUDENT TYPE

3.1.1 Dual Enrollment to non-Dual Enrollment Comparison

No dual enrollment sections of ENC 0022 are offered nor do any dual enrollment students register for the course, so no comparison studies were completed.

3.1.2 Online to Traditional Comparison

No online sections of ENC 0022 are offered, so no comparison studies were completed.

3.1.3 Full term to Mini-term Comparison

Of the 24 artifacts from Summer 2015, 7 originated from mini-term sections while the remainder originated from full summer terms. Comparisons of results are shown below in Table 2; however, no statistical significance tests are conducted because the sample sizes were too low to yield meaningful results (de Winter, 2013).

Full (n=17)	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research	Overall
mean	2.6	3.1	3.4	2.6	2.8	2.6	2.6	19.8
standard deviation	1.00	0.93	1.00	1.27	0.73	0.86	1.11	5.80
A/B Mini (n=7)	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research	Overall
mean	3.1	3.0	3.3	2.7	2.6	2.4	2.1	19.3
standard deviation	0.90	0.82	0.49	0.49	1.27	0.98	0.69	4.72

Table 2. Descriptive statistics for full term (top) and A/B mini-term (bottom) for ENC 0022 during summer 2015.

3.1.4 Comparison by Campus/Site

Of the 24 artifacts collected from ENC 0022, 6 originated from the campus while 18 originated from the Thomas Edison (Lee) campus. Mean scores vary by site with the Thomas Edison (Lee) Campus consistently exhibiting the lowest mean scores across most dimensions, as well as overall score (Table 3). No statistical significance tests are conducted because the sample sizes were too low to yield meaningful results (de Winter, 2013).

df = 3	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research	Overall
Collier	3.2	3.0	3.2	3.2	2.8	2.8	3.5	21.7
Thomas Edison (Lee)	2.6	3.1	3.4	2.5	2.7	2.5	2.2	19.0

Table 3. Comparison of mean scores by site. Bold/italics denotes highest mean score in that dimension among all sites.

3.2 DATA DISTRIBUTION & LONGITUDINAL STUDY

3.2.1 Data Distribution

Results from Section 2 briefly described the distribution in scores among rubric dimension. Varied distributions exhibited achievement gaps between dimensions at 2 or greater compared with 3 or greater. Under normal circumstances, a color map or binary raster image can be created by calculating the average scores for each dimension for a given overall (total) rubric score to provide a more thorough means of data interpretation. However, due to small sample sizes, such a study would not provide meaningful results.

3.2.2 Longitudinal Study

Table 4 shows the comparison of each rubric dimension achievement percentages for those scoring 3 or higher from Fall 2014 through Summer 2015. Table 5 is a similar table for achievement percentage at level 2 or higher. Figure 2 depicts mean scores for each rubric dimension by term. It should be noted that a comparison of achievement from term-to-term as opposed to year-to-year isn't necessarily a one-to-one comparison at FSW. Assessment reports across multiple course level and program level assessments support this and should be taken under consideration upon drawing any relevant conclusions (see <http://www.fsw.edu/facultystaff/assessment/history> for further details). This data should be considered baseline as it represents one full academic year.

	Fall 2014	Spring 2015	Summer 2015
Introductory Paragraph	63%	78%	54%
Support Paragraphs	63%	76%	75%
Organization	68%	79%	92%
Concluding Paragraph	64%	73%	63%
Grammar	55%	62%	71%
Mechanics	52%	57%	58%
Research	54%	60%	46%

Table 4. Longitudinal study of achievement at level 3 or higher by rubric dimension for ENC 0022.

	Fall 2014	Spring 2015	Summer 2015
Introductory Paragraph	95%	97%	92%
Support Paragraphs	98%	96%	96%
Organization	98%	98%	92%
Concluding Paragraph	95%	97%	79%
Grammar	94%	97%	88%
Mechanics	94%	97%	88%
Research	94%	84%	83%

Table 5. Longitudinal study of achievement at level 2 or higher by rubric dimension for ENC 0022.

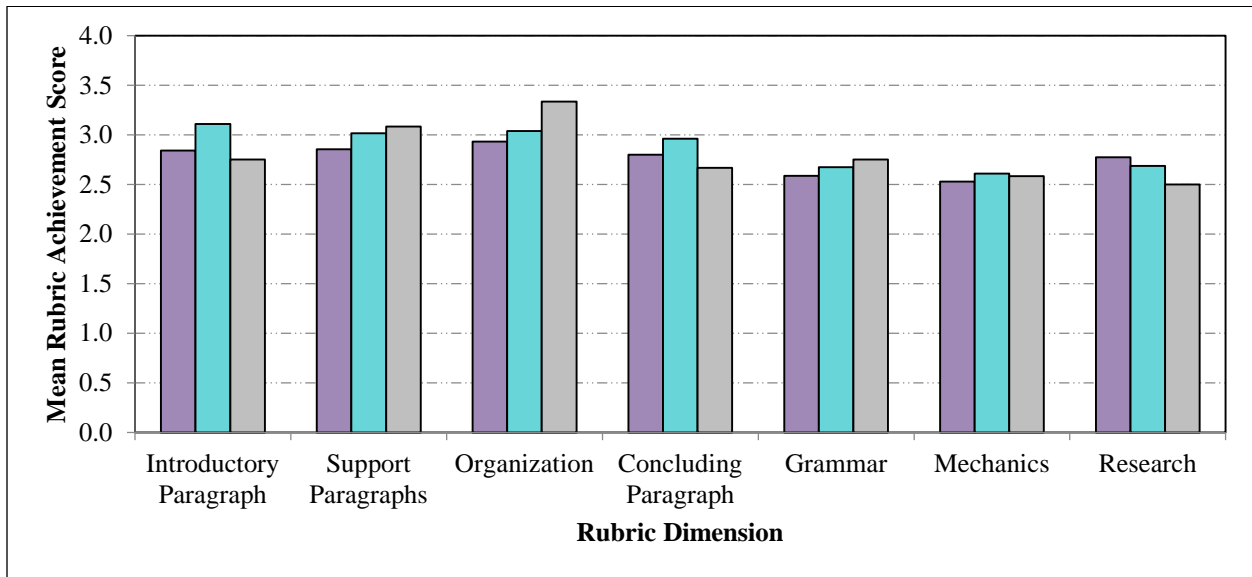


Figure 2. Mean scores by rubric dimension for fall 2014 (purple), spring 2015 (teal), and summer 2015 (gray).

4 CONCLUSIONS

The objective of Summer 2015 assessment for the FSW English Department was to assess the ENC 0022 English for College Success course using the new Student Learning Objective (SLO). The fall 2014 study resulted in the establishment by the English department of a benchmark (SLO1) measuring the percentage of artifacts scoring a 2 or greater.

A drilldown of ENC 0022 results are as follows:

1. All seven rubric dimensions have > 80% achievement at level 2 or higher with the exception of Concluding Paragraph, in which achievement at level 2 was 79%.
2. All rubric dimensions except for Mechanics have > 60% of achievement at level 3 or higher with the exception of Introductory Paragraph, in which achievement at level 3 was 54%.
3. No dual enrollment sections of ENC 0022 are offered nor do any dual enrollment students register for the course so no comparison studies were completed.
4. No online sections of ENC 0022 are offered so no comparison studies were completed.
5. In a study comparing mini-terms with the full summer term, the full term exhibited consistently higher rubric dimension mean achievement scores ranging from 0.1/4 to 0.5/4, with the exception of Introductory Paragraph and Concluding Paragraph, in which mini-term artifacts were 0.5/4 and 0.1/4 higher than full term artifacts.
6. In a cross-campus comparison, the Collier campus exhibits a higher mean rubric score in 5 of 7 dimensions compared with the Thomas Edison campus, although low sample size limits validity of the comparison.
7. In a longitudinal study, mean rubric scores for summer 2015 were highest of the 2014-2015 academic year in three dimensions (Support Paragraphs, Organization, and Grammar) and lowest of the academic year in three dimensions (Introductory Paragraph, Concluding Paragraph, and Research).

5 REFERENCES

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- Cole, R., Haimson, J., Perez-Johnson, I., and May, H. 2011. *Variability in Pretest-Posttest Correlation Coefficients by Student Achievement Level*. NCEE Reference Report 2011-4033. Washington, DC: National Center for Education Evaluation and Regional Assistance, U.S. Department of Education.
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Section 2

ENC 0022 Final (Mastery) Exam Assessment Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College’s assessment measures for the Senate Bill 1720 plan include a collection of achievement data to determine the efficacy of the developmental options and to inform course and program improvement. The FSW English Department uses a two-section final exam (written and objective) to test mastery of the subject in ENC 0022 English for College Success. The following report details the results for the final exam for ENC 0022 for the summer 2015 term.

The written section of the ENC 0022 final exam, worth 50% of the overall exam grade, is comprised of six rubric dimensions. They are Main Idea / Topic Sentence, Organization, Detail Sentences, Grammar, Mechanics / Spelling, and Concluding Sentence. Each is scored on a 4-point rubric (4-Above Average, 3-Average, 2-Needs Work, 1-Unacceptable). Artifacts from 25 students were reported for summer 2015 with only one section (13 students) not reporting. The mean scores for each rubric dimension are shown in Figure 1. A percentage of artifacts scoring a 3 or better is shown in Figure 2.

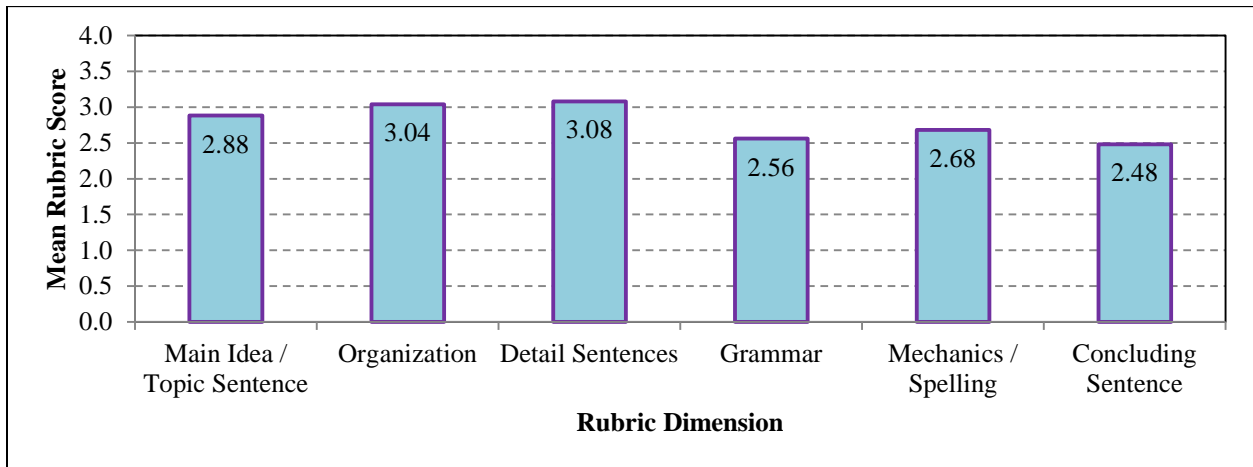


Figure 1. ENC 0022 Final (Mastery) Exam written section mean rubric scores for summer 2015.

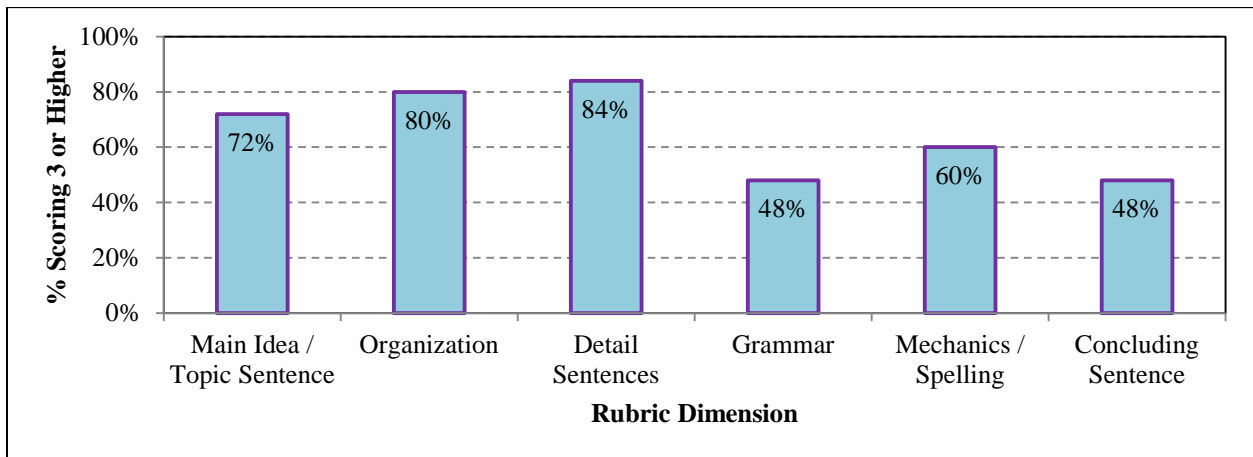


Figure 2. Percentage of summer 2015 artifacts scored 3 or higher on written section of ENC 0022 final (mastery) exam.

The mean scores for both the objective and written sections of the exam are reported in Figure 3. Differences in the means between written section and the objective section were tested for significance using a Welch's t-test according to standard methods^{1,2,3,4} and were found to not be statistically significantly different ($t(48)=0.209$, $p=0.084$). Therefore we must reject the null hypothesis that the difference in the means of the written and objective sections of the exam is equal to 0, and we can conclude with 95% confidence that the differences in scores are not solely due to chance.

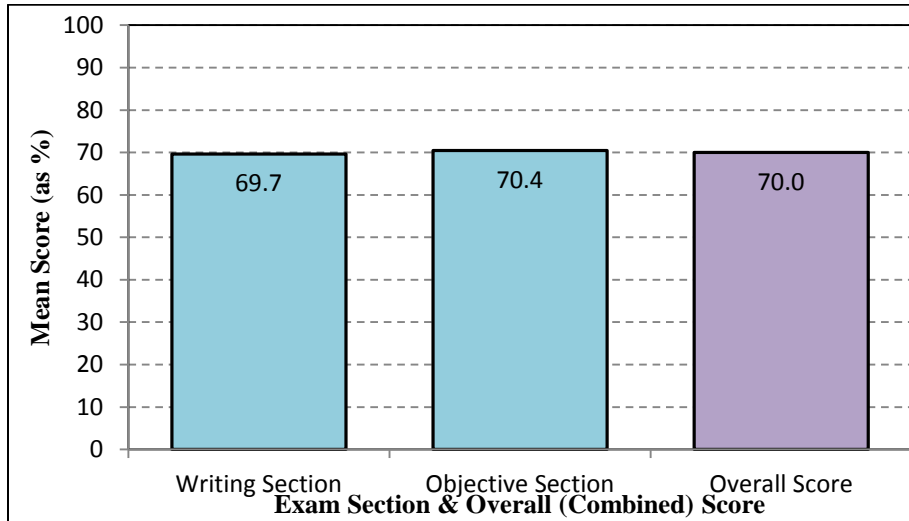


Figure 3. Mean scores by exam section and overall score for the summer 2015 ENC 0022 final (mastery) exam.

Of the 25 artifacts collected from the final exam, 17 originate from the compressed learning strategy version of the course while 8 originate from the modularized learning strategy of the course. A comparison of mean scores by learning strategy is shown in Figure 4. Differences in the means between compressed and modularized learning strategy were not tested for significance as the sample size for modularized is exceedingly small and likely to yield false results⁵.

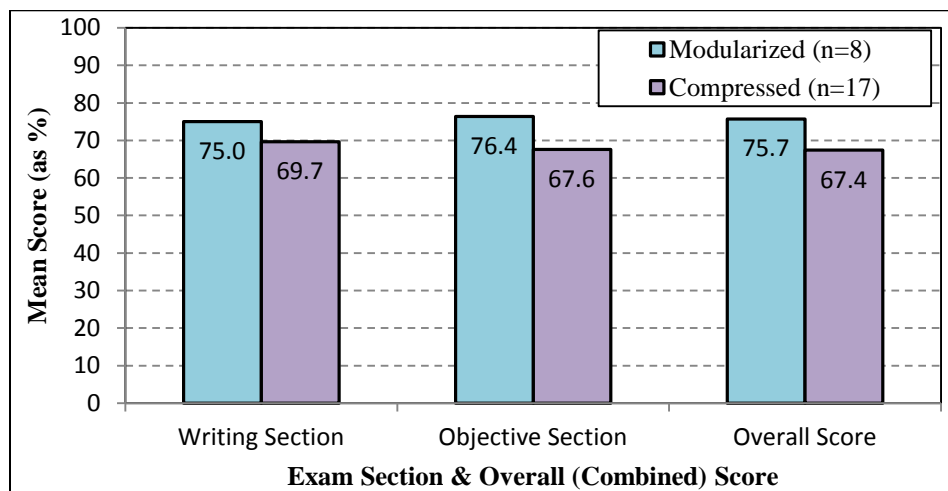


Figure 4. Comparison of summer 2015 exam section and overall scores by learning strategy.

Success rates based on achievement at the 70% level by learning strategy were compiled and are shown in Figure 5. The percentage of artifacts scored 70% or better on the final (mastery) exam originating from modularized sections is 87.5% for both written and objective sections of the exam. However, the sample size for modularized sections was only 8, thus limiting the impact of the results (7/8 artifacts scored 70% or higher). The percentage of artifacts scored 70% or better on the final (mastery) exam originating from compressed sections is 35.3% for the writing section and 35.3% for the objective section with an overall (combined) score of 35.3% (in all cases, this amounts to 6/17 artifacts achieving 70% or higher).

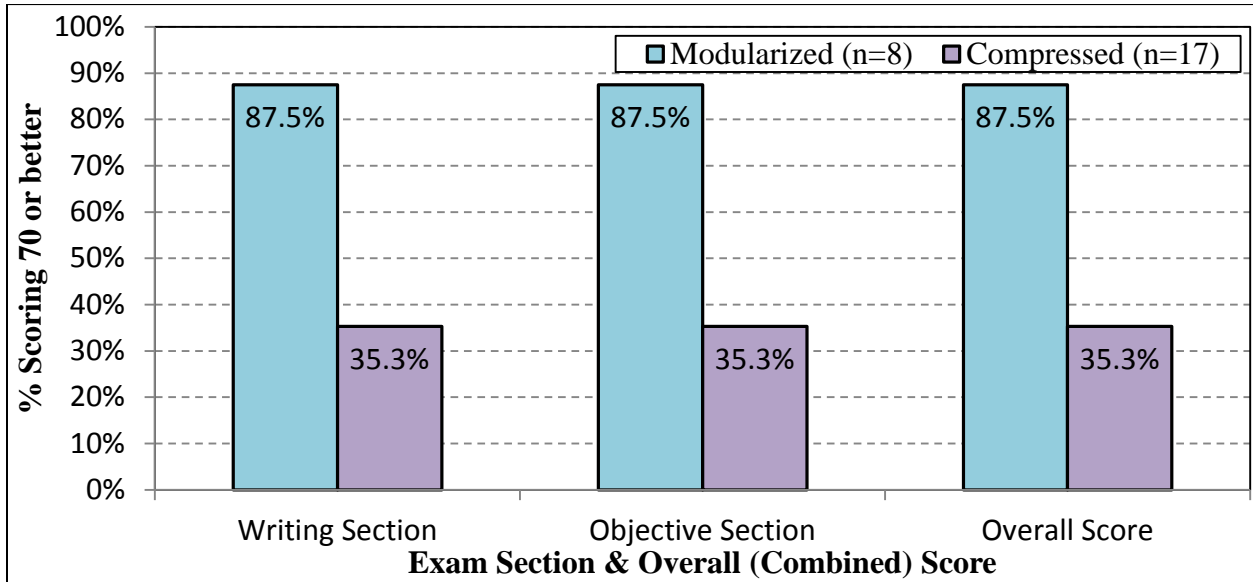


Figure 5. Summer 2015 ENC 0022 final (mastery) exam success rate ($\geq 70\%$) by section and learning strategy.

¹Davis, J.C. 1973. Statistics and Data Analysis in Geology. John Wiley & Sons, New York, New York, 564 pp.

²McDonald, J.H. 2009. Handbook of Biological Statistics (2nd ed.). Sparky House Publishing, Baltimore, Maryland.

³Siegel, S. 1956. Nonparametric statistics for the behavior sciences. McGraw-Hill, New York, New York, 312 pp.

⁴Wilkinson, L. 1999. APA Task Force on Statistical Inference. Statistical Methods in Psychology Journals: Guidelines and Explanations. American Psychologist 54 (8), 594–604.

⁵de Winter, J.C.F. 2013. Using the Student's T-Test with Extremely Small Sample Sizes. Practical Assessment, Research, and Evaluation, 18(10), 1-12.

Section 3

ENC 0022 Survey Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College tracks satisfaction of current developmental courses through a survey administered at the end of each term. The data is in support of assessment measures for the SB1720 plan to determine efficacy of developmental options and to inform course and program improvement. The following are the results for the summer 2015 term.

Of the 44 students enrolled in ENC 0022 during summer 2015, 11 responded to the survey for a response rate of 25.0%. Of the 11 respondents, 36.4% were enrolled in the traditional classroom learning strategy while 63.6% were enrolled in the computer assisted learning strategy.

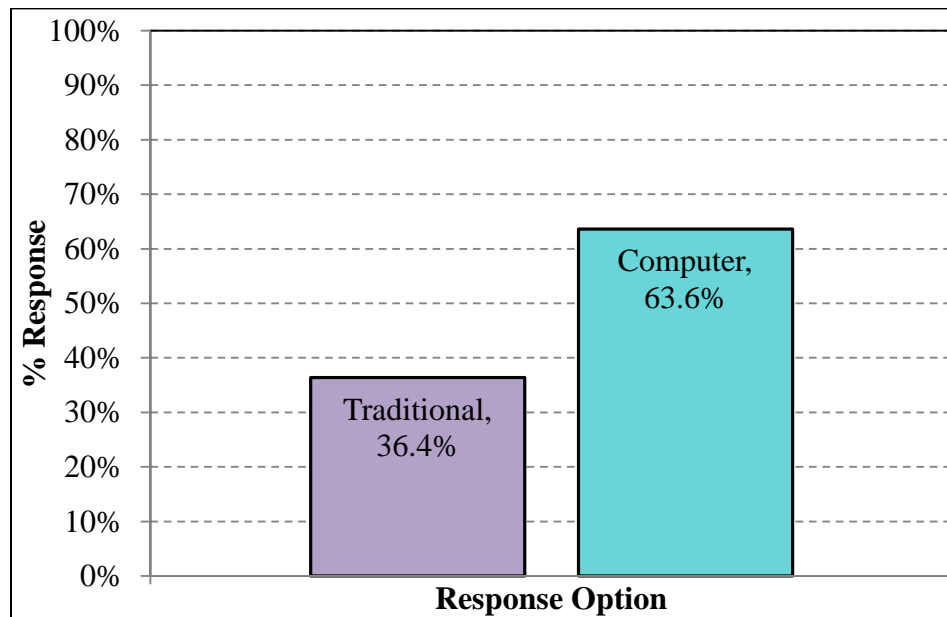


Figure 1. Response rate by learning strategy.

Questions 1 – 6 of the survey establish general statistics of the survey respondent such as class meeting times, gender, age group, etc. Questions 7 – 10 are Likert scale questions describing student perception of learning and achievement in various areas. The below are the prompts for Question #7 followed by the results in Figure 2.

Q7: I believe I have improved in the following areas since taking this English class.

- 1. English Grammar*
- 2. Punctuation*
- 3. Sentence skills*
- 4. Essay writing*
- 5. Vocabulary*
- 6. Spelling*

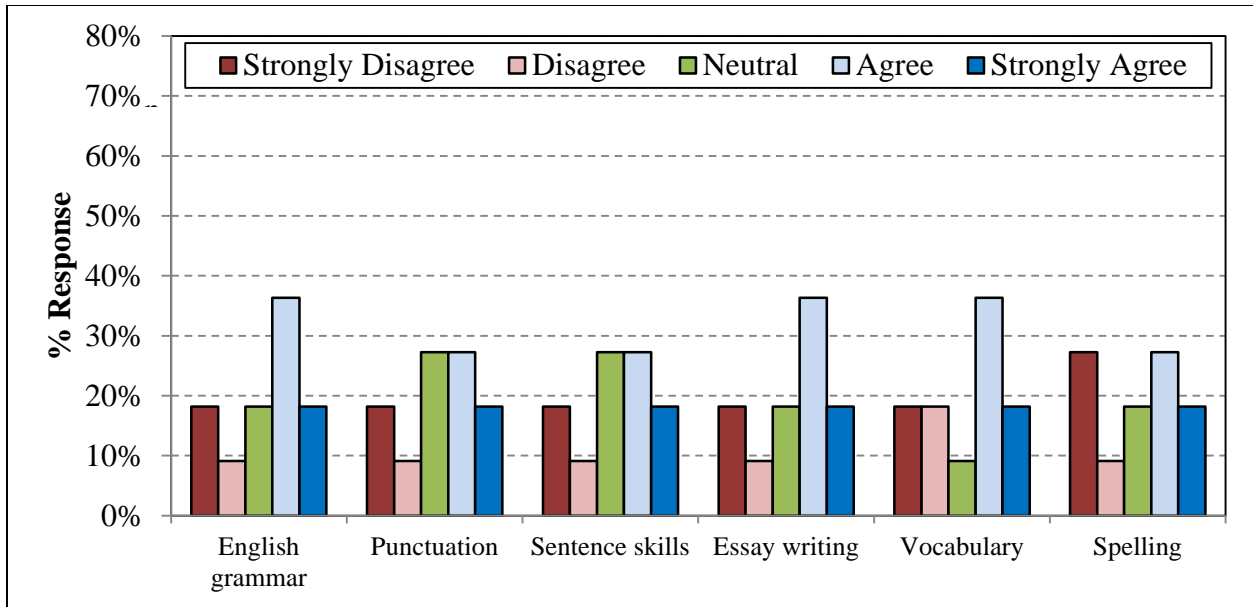


Figure 2. Responses to Question #7 " I believe I have improved in the following areas since taking this English class."

All six areas exhibit moderately positive responses (Agree or Strongly agree) ranging from 45% to 55% although with only 11 responses, results are tenuous. Q7-1, Q7-4, and Q7-5 exhibit the highest positive response rates at 55%. Question 7-6 exhibits the highest negative response rates (Disagree or Strongly disagree) at 36%. Question 7-6 is historically the lowest performing among all Q7 questions.

The below are the prompts for Question #8 followed by the results in Figure 3.

Q8: I believe I have benefited from the following aspects of the Academic Support Writing Center this semester.

- 1. The resources available in the Writing Center*
- 2. The instructional assistants*
- 3. The access to computers*
- 4. The programs on the computers*
- 5. The hours the Writing Center was open and available to me*
- 6. The required Writing Center hours for my English class*

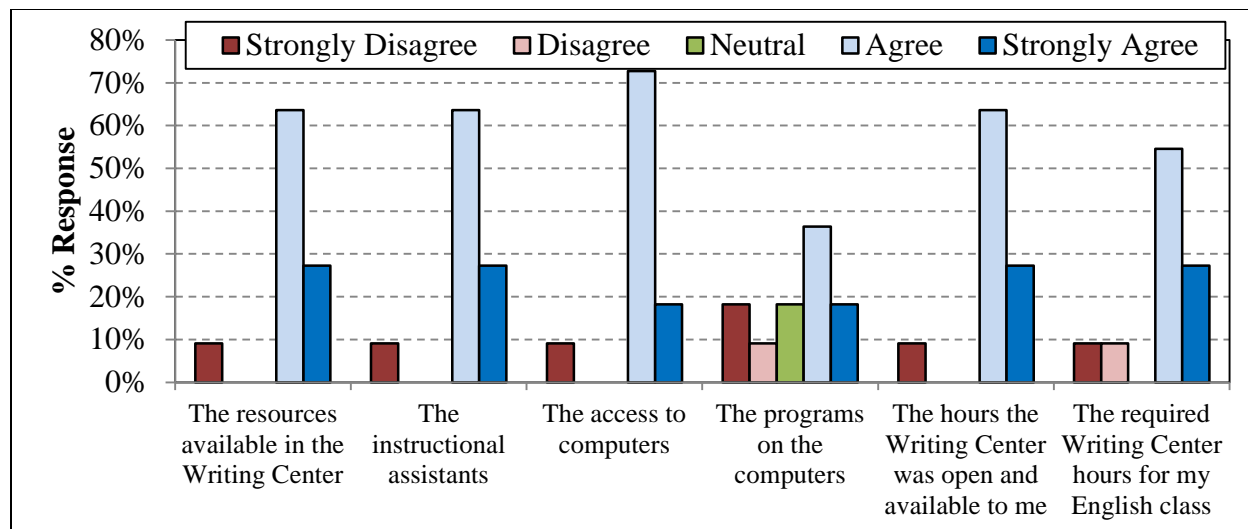


Figure 3. Responses to Question #8 "I believe I benefited from the following aspects of the Academic Support Writing Center this semester."

All six areas exhibit positive responses (Agree or Strongly agree) of 50% or better. Q8-1, Q8-2, Q8-3, Q8-5, and Q8-6 exhibit positive response rates greater than 80%. Question 8-4 exhibits the highest negative response rates (Disagree or Strongly disagree) at 27%. Again, with only 11 respondents, results are tenuous.

The below are the prompts for Question #9 followed by the results in Figure 4.

Q9: I was satisfied with the following aspects of my English class this semester.

1. The information on the course syllabus
2. The content of the course textbook
3. The McGraw-Hill Connect computer component
4. The amount of homework assigned
5. The number of tests
6. The number of written assignments
7. The length of time in class
8. The frequency of class meetings
9. The pace of the course

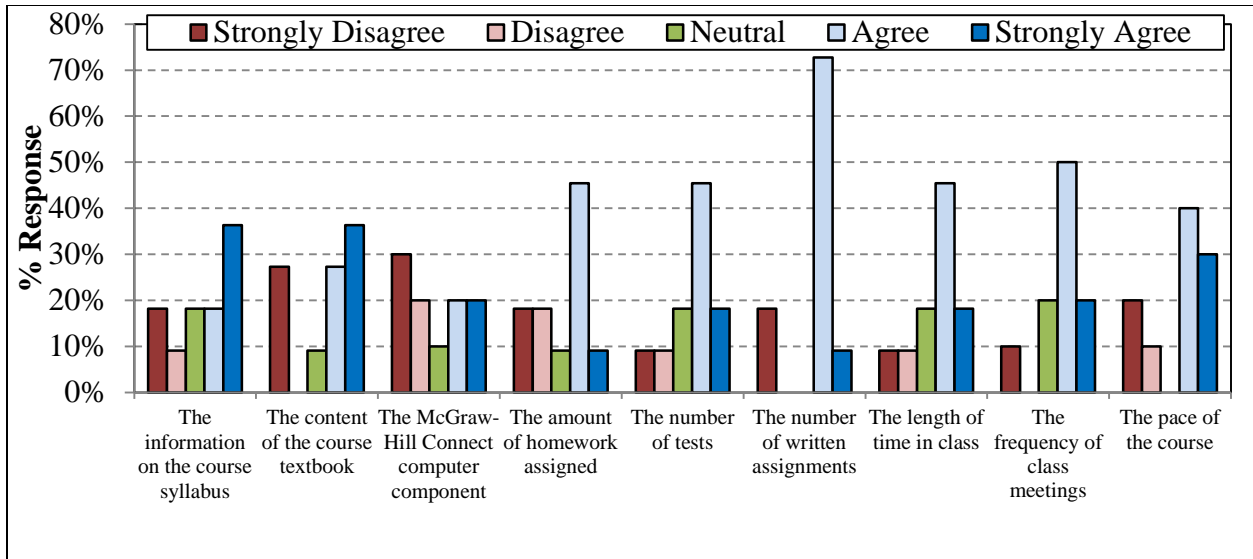


Figure 4. Responses to Question #9 "I was satisfied with the following aspects of my English class this semester."

Eight of nine areas exhibit positive responses (Agree or Strongly agree) of 50% or better. Question 9-3 exhibits a positive response rate of 40%. Question 9-5 exhibits a positive response rate of over 80%. Again, due to low response (11 respondents) results are tenuous.

The below are the prompts for Question #10 followed by the results in Figure 5.

- Q10: This English course prepared me for:
1. The writing I will do in college
 2. The expectations of college courses
 3. The time management I must have in college
 4. The skills I need to take tests in college
 5. The use of technology in college classes

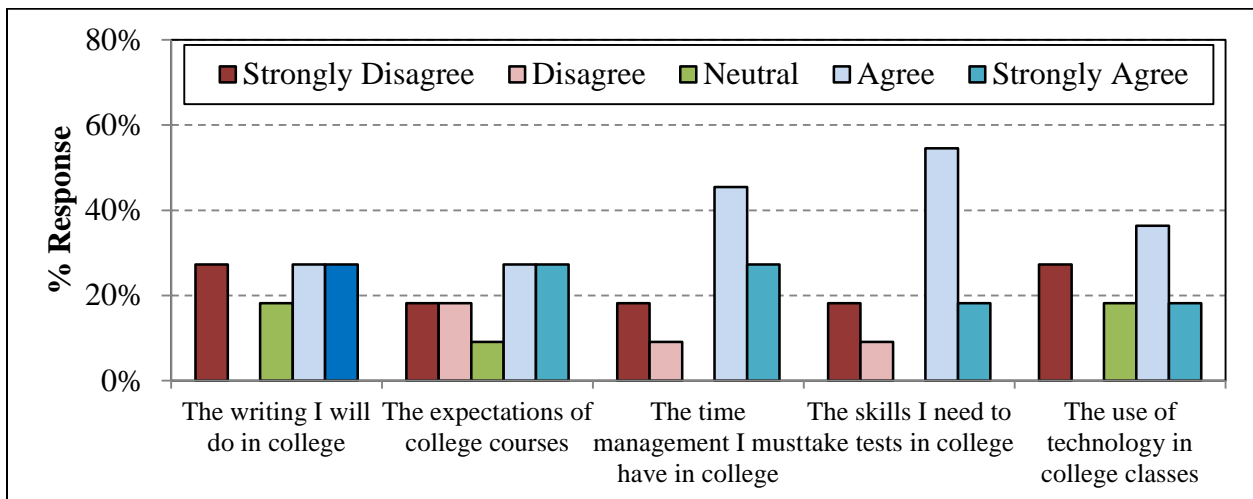


Figure 5. Responses to Question #10 "This English course prepared me for:"

Questions 10-4 and 10-5 exhibit positive responses (Agree or Strongly agree) of 65% or better. Questions 10-1, 10-2, and 10-5 exhibit positive response rates of approximately 54%. Question 10-2 exhibits the highest negative response rates (Disagree or Strongly disagree) at 36%.

A tabulation of positive responses (Strongly agree or Agree) is included below based on learning strategy (Table 1). Of the 26 questions, results are split fairly evenly in terms of positive response rates from traditional respondents compared with computer-based although with a limited sample size it is unclear whether any differences are meaningful. Only 4 respondents were from the traditional classroom while 7 respondents were from the computer-based classroom. Such a small sample size meant a Fisher's exact test would not merit useful results.

	Traditional	Computer-based
Q7-1	50%	57%
Q7-2	75%	29%
Q7-3	50%	43%
Q7-4	75%	43%
Q7-5	75%	43%
Q7-6	50%	43%
Q8-1	75%	100%
Q8-2	75%	100%
Q8-3	75%	100%
Q8-4	25%	71%
Q8-5	75%	100%
Q8-6	75%	86%
Q9-1	75%	43%
Q9-2	75%	57%
Q9-3	25%	43%
Q9-4	25%	71%
Q9-5	50%	71%
Q9-6	75%	86%
Q9-7	50%	71%
Q9-8	50%	71%
Q9-9	50%	71%
Q10-1	50%	57%
Q10-2	50%	57%
Q10-3	75%	71%
Q10-4	75%	71%
Q10-5	25%	71%

Table 1. Positive survey response (Strongly Agree or Agree) by learning strategy. Shaded cells denote higher of the two learning strategies. None were found to be statistically significantly different.

Section 4

MAT 0057 Final (Mastery) Exam Assessment Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College's assessment measures for the Senate Bill 1720 plan include a collection of achievement data to determine the efficacy of the developmental options and to inform course and program improvement. The FSW Math Department uses a 45-question final exam to test mastery of the subject in MAT 0057 Mathematics for College Success. The following report details the results for the final exam for MAT 0057 for the summer 2015 term.

During summer 2015, 17 course sections were offered. Of those, 16 sections were able to be collected. One section was never reported. In the 16 reporting sections, 128 artifacts from the final exam were collected with 36 originating from the compressed learning strategy version of the course and 92 originating from the modularized learning strategy version of the course. A comparison of mean scores by learning strategy is shown in Figure 1. Differences in the means between compressed and modularized learning strategy were tested for significance using a Welch's t-test according to standard methods^{1,2,3,4} and were found to be statistically significantly different ($t(126)=3.994$, $p=1.57 \times 10^{-4}$). Therefore we can reject the null hypothesis that the difference in the means of the compressed and modularized course sections is equal to 0, and we can conclude with 95% confidence that the differences in scores are not solely due to chance.

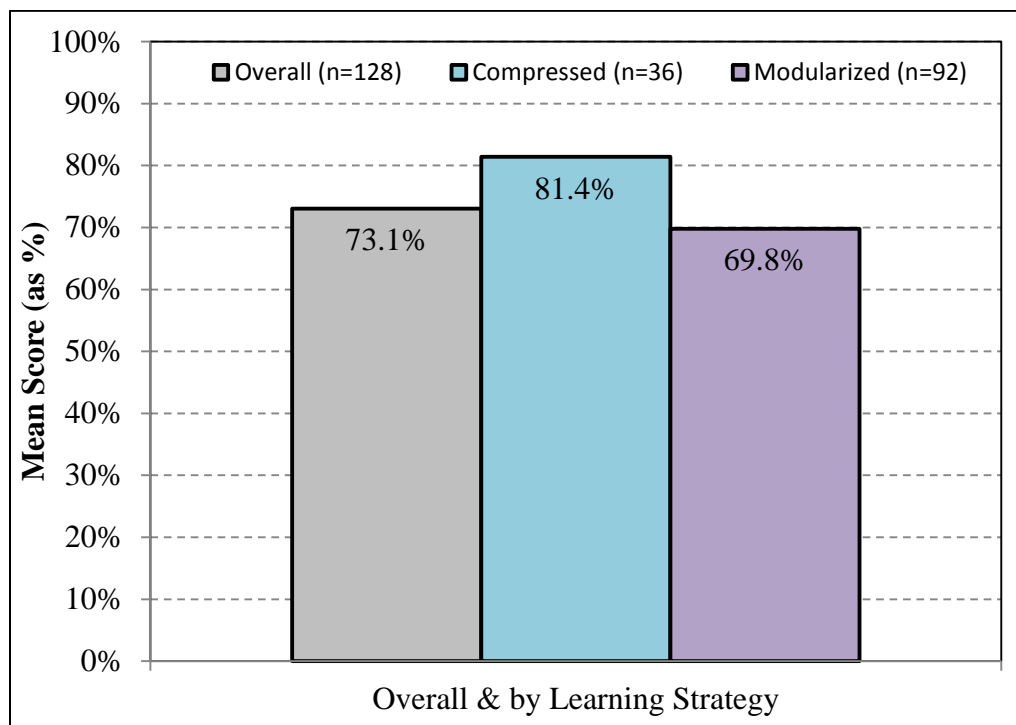


Figure 1. Comparison of MAT 0057 Final exam (mastery exam) mean scores for overall (gray), Compressed (teal), and modularized (purple) for summer 2015.

Success rates based on achievement at the 50%, 70%, and 90% level were compiled. The percentage of artifacts scored 50% or better on the final (mastery) exam is 97% for those originating from the compressed learning strategy and 89% for those originating from the modularized learning strategy with

an overall rate of 91% from either strategy. The percentage of artifacts scored 70% or better on the final (mastery) exam is 86% for those originating from the compressed learning strategy and 54% for those originating from the modularized learning strategy with an overall rate of 63% from either strategy. The percentage of artifacts scored 90% or better on the final (mastery) exam is 42% for those originating from the compressed learning strategy and 11% for those originating from the modularized learning strategy with an overall rate of 20% from either strategy.

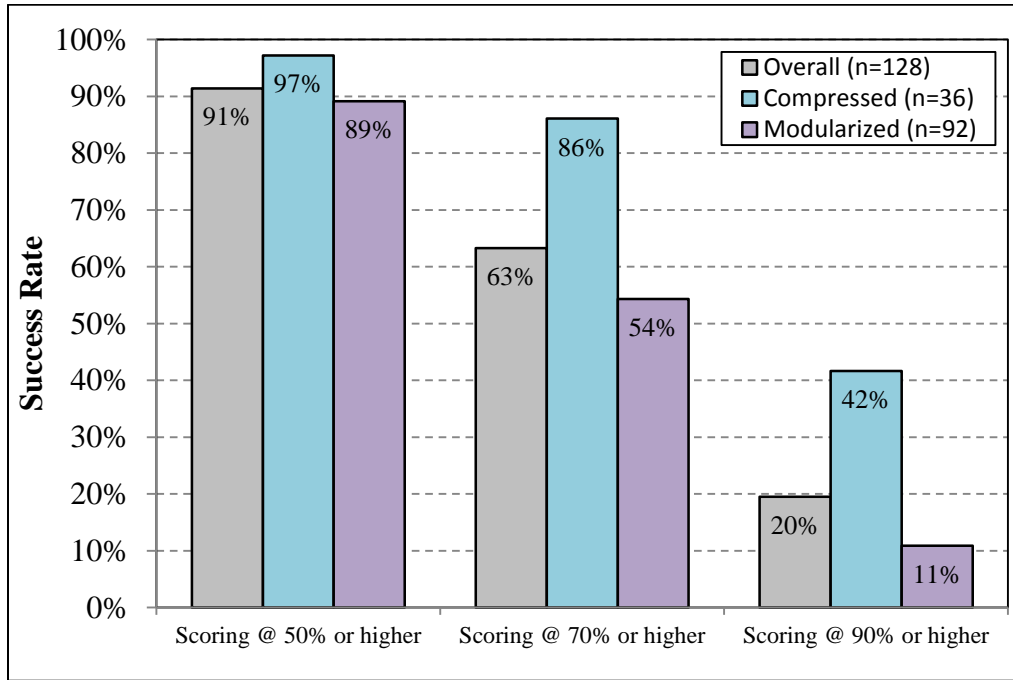


Figure 2. Comparison of MAT 0057 final exam success rates at scores of 50% or higher, 70% or higher, and 90% or higher.

Of the 128 artifacts from the final exam, 4 originated from the Charlotte Campus, 16 from the Collier Campus, 3 from the Hendry-Glades Center, and 105 from the Thomas Edison (Lee) Campus. A comparison of mean scores by campus is shown in Figure 3. Results of the ANOVA exhibit no statistically significant difference between sites [$F(3, 124) = 1.410, p=0.243$]. Therefore, we cannot reject the null hypothesis that the mean combined rubric scores at each site are equal to each other and we cannot conclude with a 95% confidence that the differences in scores are not solely due to chance.

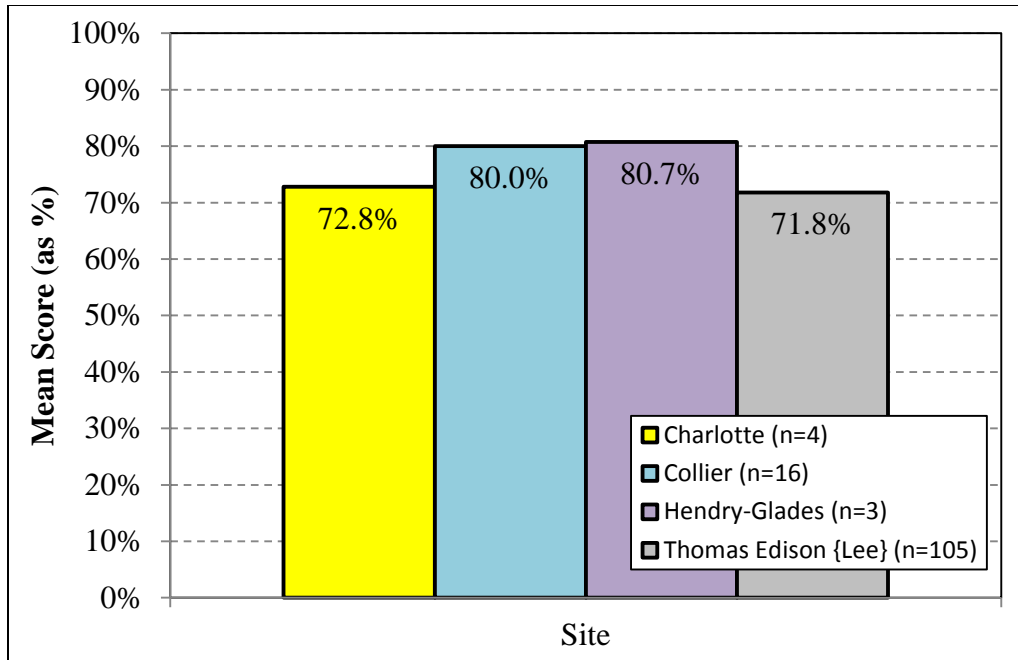


Figure 3. Comparison of MAT 0057 Final exam (mastery exam) scores for Charlotte (yellow), Collier (teal), Hendry-Glades (purple), and Thomas Edison {Lee} (gray) campuses for summer 2015.

¹Davis, J.C. 1973. Statistics and Data Analysis in Geology. John Wiley & Sons, New York, New York, 564 pp.

²McDonald, J.H. 2009. Handbook of Biological Statistics (2nd ed.). Sparky House Publishing, Baltimore, Maryland.

³Siegel, S. 1956. Nonparametric statistics for the behavior sciences. McGraw-Hill, New York, New York, 312 pp.

⁴Wilkinson, L. 1999. APA Task Force on Statistical Inference. Statistical Methods in Psychology Journals: Guidelines and Explanations. American Psychologist 54 (8), 594–604.

Section 5

MAT 0057 Survey Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College tracks satisfaction of current developmental courses through a survey administered at the end of each term. The data is in support of assessment measures for the SB1720 plan to determine efficacy of developmental options and to inform course and program improvement. The following are the results for the summer 2015 term.

Of the 224 students enrolled in MAT 0057 during summer 2015, 72 responded to the survey for a response rate of 32.1%. Of the 137 respondents, 42% were enrolled in the traditional classroom, or compressed, learning strategy while 58% were enrolled in the computer assisted, or modularized learning strategy.

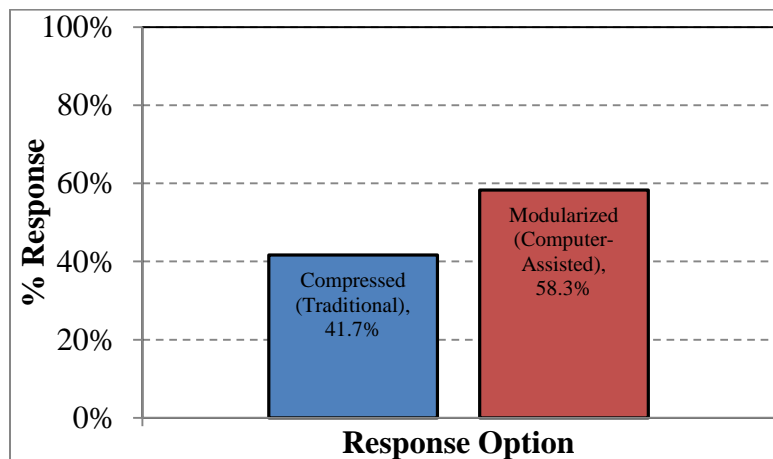


Figure 1. Response rate by learning strategy.

Questions 1 – 7, and 9 of the survey establish general statistics of the survey respondent such as class meeting times, gender, age group, etc. Questions 8, 10 – 12 are Likert scale questions describing student perception of learning and achievement in various areas. The below are the prompts for Question #8 followed by the results in Figure 2.

Q8: *I believe I have improved in the following areas since taking this Math class.*

- 1. I am better at Math*
- 2. Math is less scary*
- 3. Math makes more sense to me*
- 4. Math is easier for me*
- 5. I have learned how to manage my time appropriately to succeed in math*
- 6. I will be more successful in future Math courses*

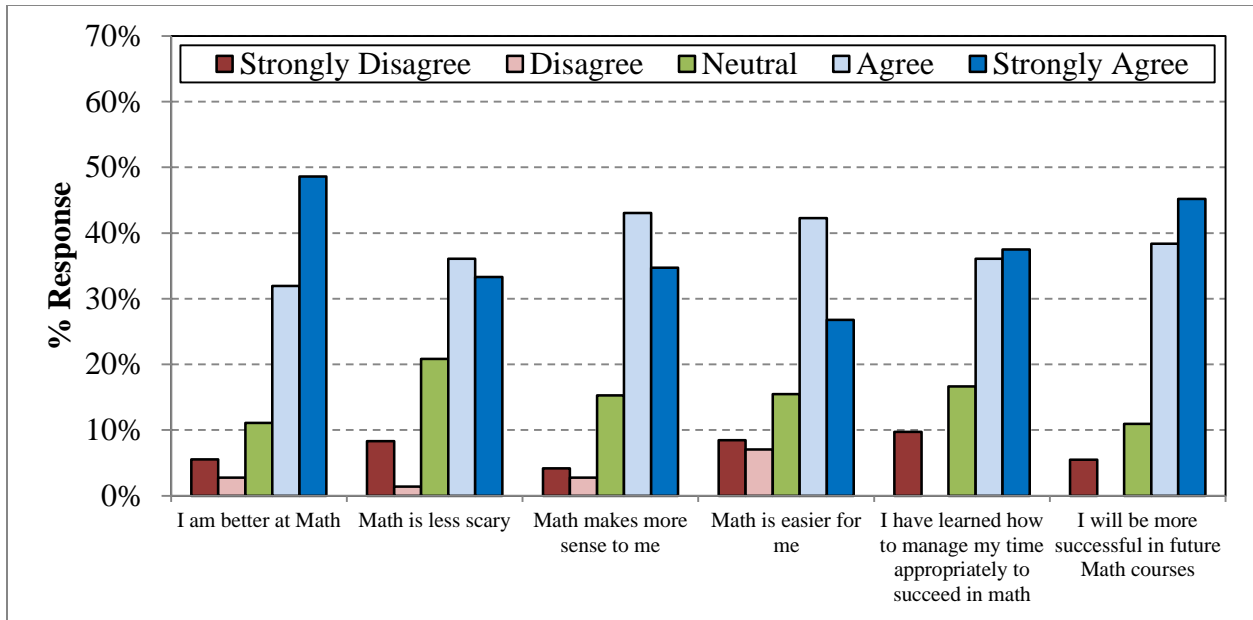


Figure 2. Responses to Question #8 " I believe I have improved in the following areas since taking this Math class."

All six areas exhibit positive responses (Agree or Strongly agree) of 60% or better. Q8-1, and 8-6 exhibit positive response rates greater than 80%. Question 8-4 exhibits the highest negative response rates (Disagree or Strongly disagree) with 24%.

The below are the prompts for Question #10 followed by the results in Figure 3.

Q10: I benefited from the following aspects of the Math Academic Support Center this semester.

1. The resources available in the Math Center
2. The instructional assistants
3. The access to computers
4. The programs on the computers
5. The hours the Math Center was open and available to me

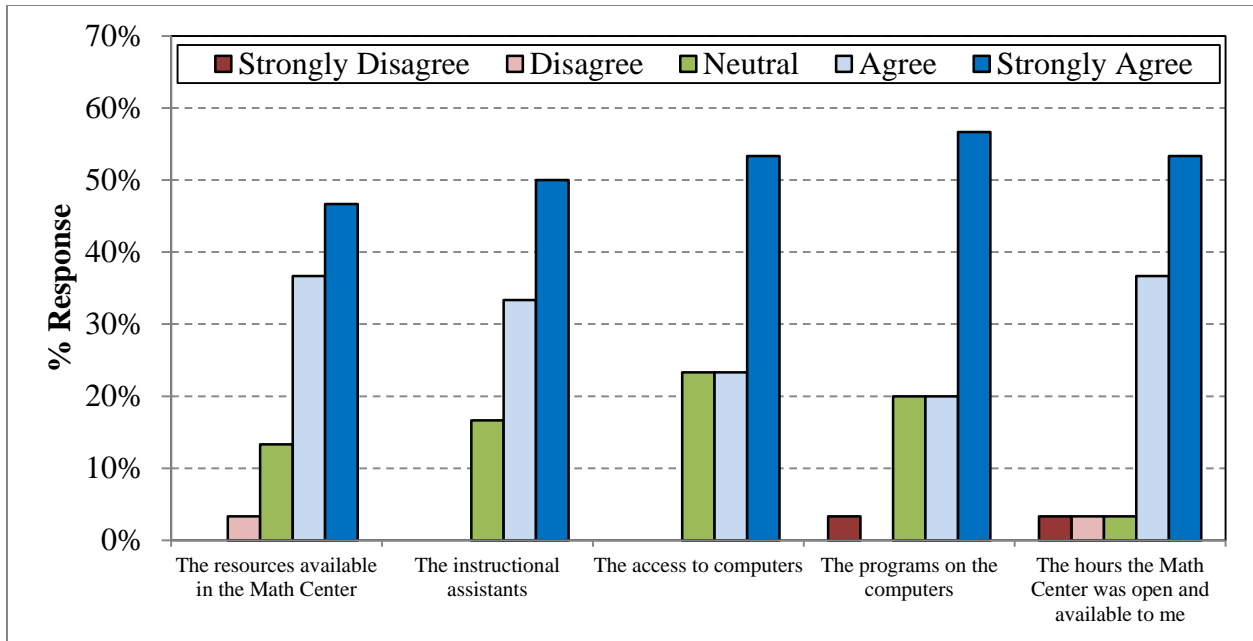


Figure 3. Responses to Question #10 "I benefited from the following aspects of the Math Academic Support Center this semester."

All five areas exhibit positive responses (Agree or Strongly agree) of 70% or better. Q10-1, 10-2, and 10-5 exhibit positive response rates greater than 80%. No question exhibits negative response rates (Disagree or Strongly disagree) higher than 7%.

The below are the prompts for Question #11 followed by the results in Figure 4.

Q11: I was satisfied with the following aspects of my Math class this semester.

1. The frequency of class meetings
2. The information on the course syllabus
3. The online homework with MyMathLabs Plus
4. The amount of homework assigned
5. The clarity of the explanations within the MyLabsPlus site
6. The number of tests
7. The length of time in class
8. The pace of the course

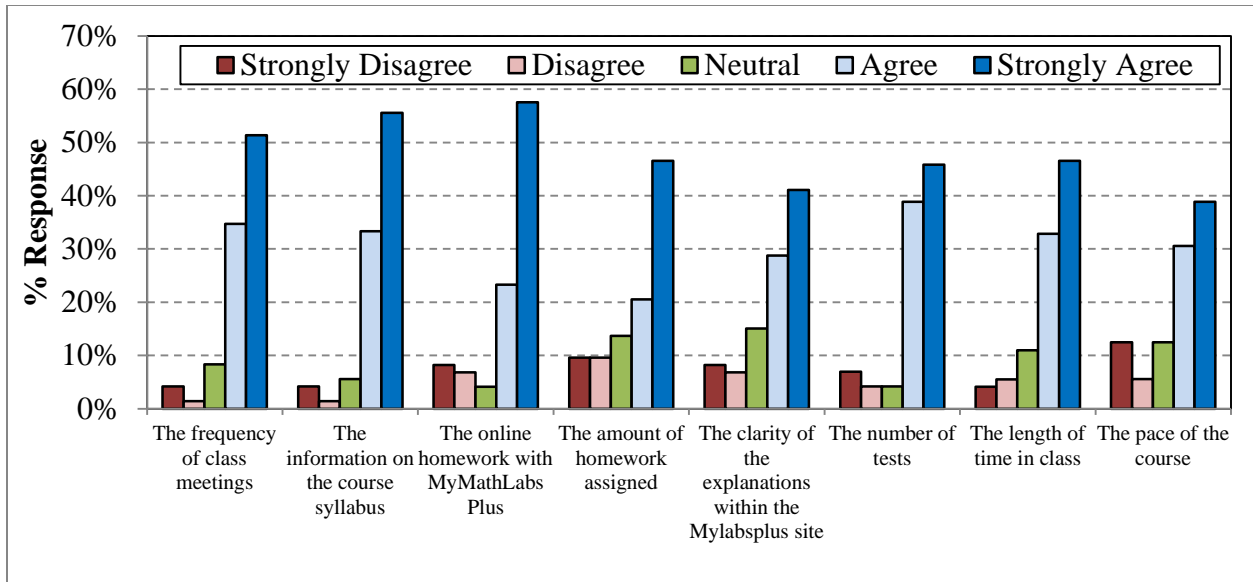


Figure 4. Responses to Question #11 "I was satisfied with the following aspects of my Math class this semester."

All eight areas exhibit positive responses (Agree or Strongly agree) of 65% or better. Q11-1, 11-2, 11-3, 11-6, and 11-7 exhibit positive response rates greater than 75%. Questions 11-4 and 11-8 exhibit the highest negative response rates (Disagree or Strongly disagree) with 19% and 18%, respectively.

The below are the prompts for Question #12 followed by the results in Figure 5.

- Q12: This Math course prepared me for:
1. The next Math classes I will take
 2. The time management I must have in college
 3. The skills I need to take tests in college

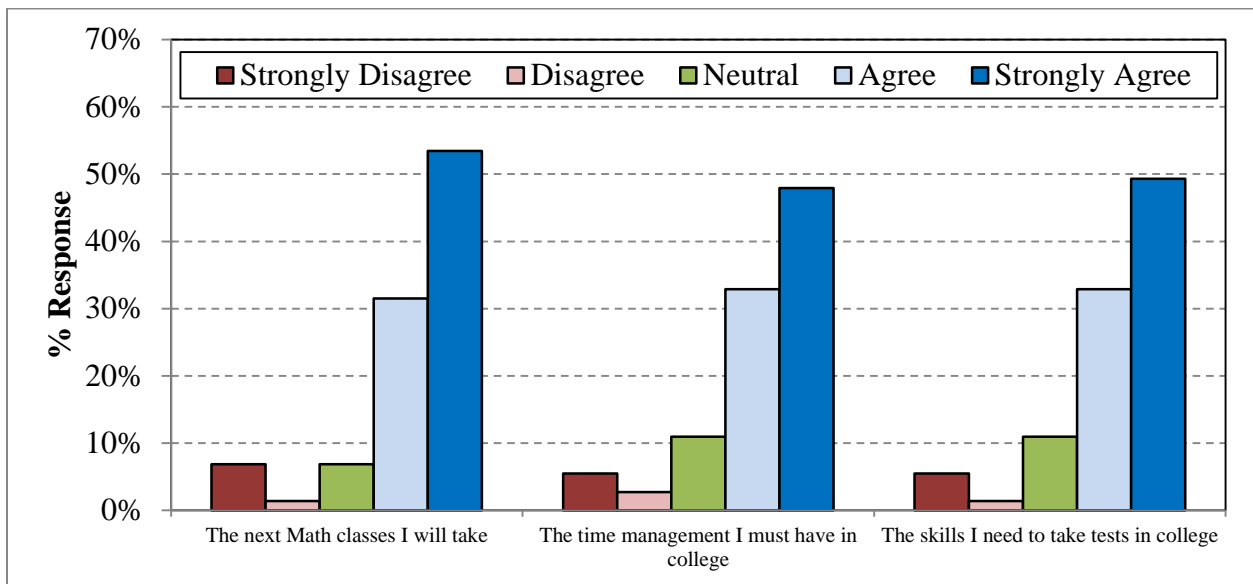


Figure 5. Responses to Question #12 "This Math course prepared me for:"

All three areas exhibit positive responses (Agree or Strongly agree) of 80% or better. Question 12-1 and 12-2 exhibits the highest negative response rates (Disagree or Strongly disagree) with both at 8%.

A tabulation of positive responses (Strongly agree or Agree) is included below based on learning strategy (Table 1). Of the 22 questions, 19 exhibit a more positive response from modularized respondents. Question 8-6 was found to be statistically significantly different via Fisher’s exact test ($p=0.022$).

	Traditional (Compressed)	Computer-based (Modularized)
Q8-1	76.7%	81.0%
Q8-2	60.0%	73.8%
Q8-3	76.7%	76.2%
Q8-4	66.7%	66.7%
Q8-5	73.3%	71.4%
Q8-6	70.0%	92.9%
Q10-1	70.0%	89.5%
Q10-2	60.0%	94.8%
Q10-3	70.0%	79.0%
Q10-4	70.0%	79.0%
Q10-5	80.0%	94.8%
Q11-1	83.3%	87.8%
Q11-2	86.7%	90.2%
Q11-3	76.7%	83.3%
Q11-4	76.7%	59.5%
Q11-5	63.3%	73.8%
Q11-6	80.0%	87.8%
Q11-7	73.3%	83.3%
Q11-8	73.3%	65.9%
Q12-1	83.3%	85.7%
Q12-2	76.7%	83.3%
Q12-3	73.3%	88.1%

Table 1. Positive survey response (Strongly Agree or Agree) by learning strategy. Shaded cells denote higher of the two learning strategies. Statistically significantly different results in bold/italics.

Section 6

REA 0019 Mastery Exam Assessment Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College’s assessment measures for the Senate Bill 1720 plan include a collection of achievement data to determine the efficacy of the developmental options and to inform course and program improvement. The learning outcome: Students will read at a post-secondary level that correlates with college success by the completion of the Developmental Reading sequence, is measured through the comparison of pre- and post-tests conducted using the Townsend Press College Reading Test. The following report details the results for Townsend Press College Reading Test the summer 2015 term.

In a comparison of pre-test to post-test results, the mean scores increased across all rubric criterion as well as the overall score (Figure 1). The difference in the means of the overall score from pre-to-post test scores was tested for significance using a paired means t-test according to standard methods^{1,2,3,4}. The paired means t-test results indicate a statistically significant improvement from 23.4 to 28.3 ($t(14)=3.13$, $p=0.028$). Therefore we must reject the null hypothesis that the difference in the means of the pre- and post-test scores is equal to 0, and we can conclude this with a 95% confidence that the differences in scores are not solely due to chance. Based on the work of Johnson (2013), there is a 17-25% chance that the significant result is a false positive (i.e. Type I errors) Figure 2 presents a graphical representation of the change in score distribution from pre-test to post-test.

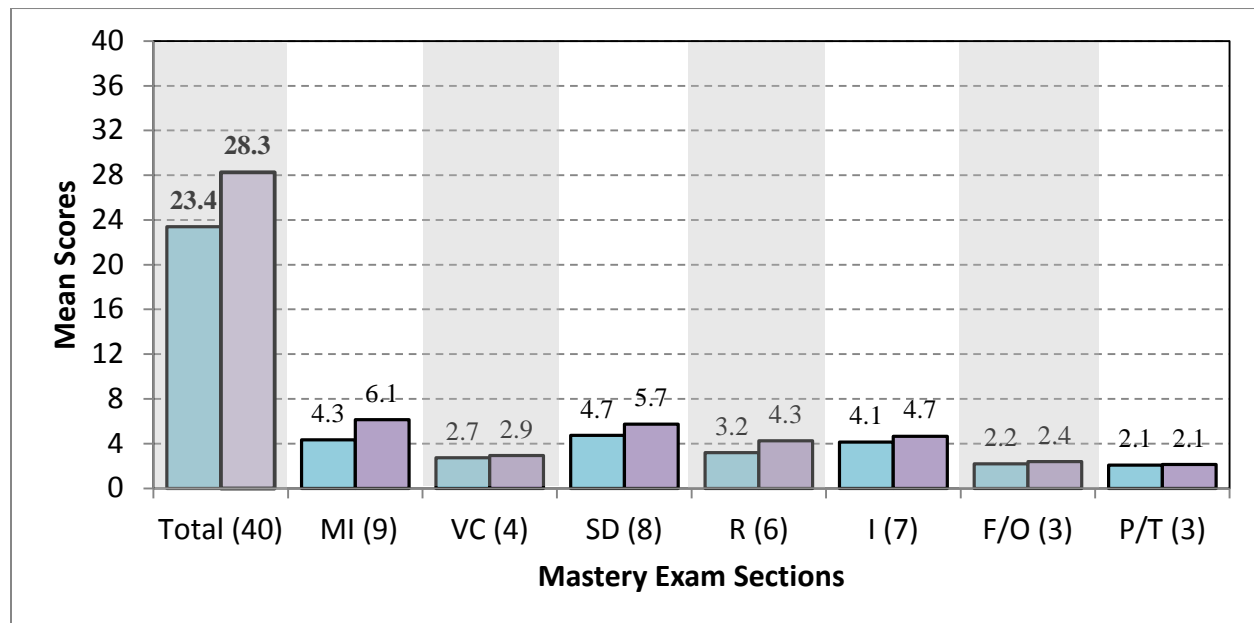


Figure 1. Comparison of pre- (teal) and post-test (purple) achievement for the Townsend Press College Reading Test (serving as the course mastery exam) conducted during the summer 2015 semester in REA 0019 courses. MI: Main Idea (9 points), VC: Vocabulary (4 points), SD: Supporting Details (8 points), R: Relationships (6 points), I: Inferences (7 points), F/O: Fact/Opinion (3 points), and P/T: Purpose/Tone (3 points) for a total of 40 possible points.

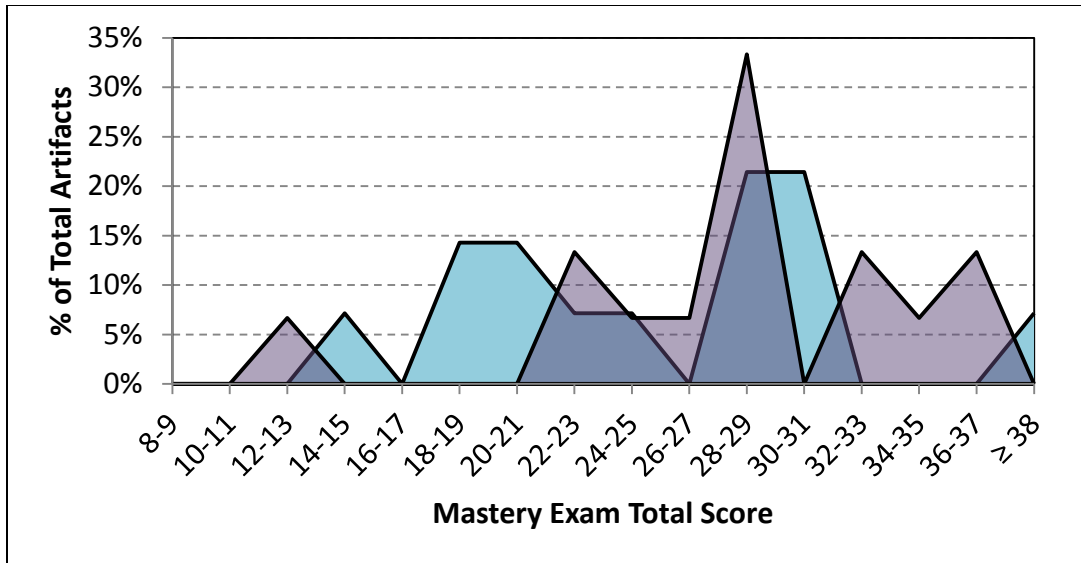


Figure 2. Distribution of pre- (teal) and post-test (purple) scores for the Townsend Press College Reading Test (serving as the course mastery exam) conducted during the summer 2015 semester in REA 0019 courses.

A comparison of pre-test to post-test results as a function of learning strategy (modularized vs. compressed; also known as computer-based and traditional, respectively) is shown in Figure 3. Since no sections of compressed were offered during summer 2015 the results are identical to totals shown in Figure 1 and are only displayed here for consistency with previous reports.

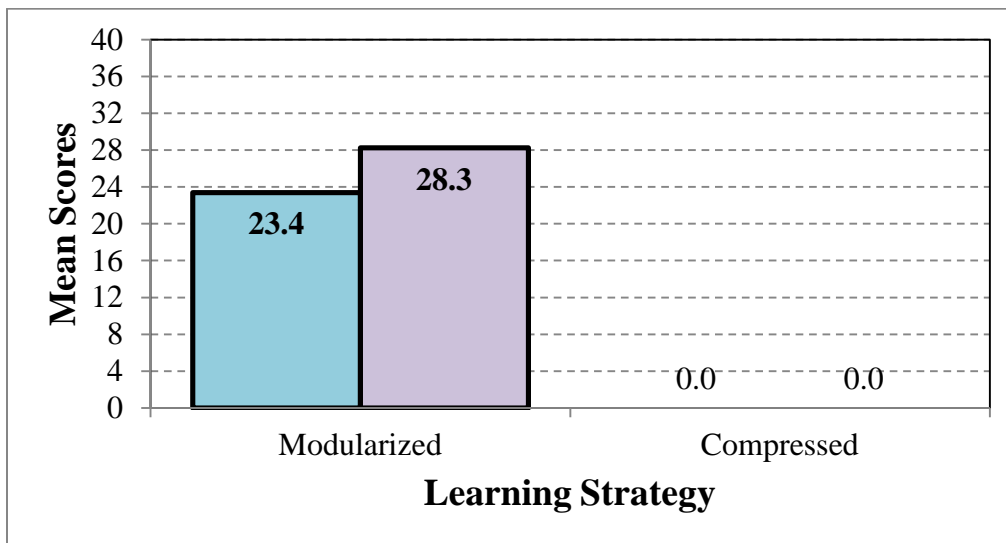


Figure 3. Comparison of pre- (teal) and post-test (purple) achievement for the Townsend Press College Reading Test (serving as the course mastery exam) conducted during the summer 2015 semester in REA 0019 courses based on enrollment in a modularized (computer-based) course or a traditional (compressed) course.

¹Davis, J.C. 1973. Statistics and Data Analysis in Geology. John Wiley & Sons, New York, New York, 564 pp.
²McDonald, J.H. 2009. Handbook of Biological Statistics (2nd ed.). Sparky House Publishing, Baltimore, Maryland.
³Siegel, S. 1956. Nonparametric statistics for the behavior sciences. McGraw-Hill, New York, New York, 312 pp.
⁴Wilkinson, L. 1999. APA Task Force on Statistical Inference. Statistical Methods in Psychology Journals: Guidelines and Explanations. American Psychologist 54 (8), 594-604.

Section 7

REA 0019 Survey Report – Summer 2015

Author: Joseph F. van Gaalen, Ph.D., Director, Academic Affairs Assessment

Florida SouthWestern State College tracks satisfaction of current developmental courses through a survey administered at the end of each term. The data is in support of assessment measures for the SB1720 plan to determine efficacy of developmental options and to inform course and program improvement. The following are the results for the summer 2015 term.

Of the 15 students enrolled in REA 0019 during summer 2015, only 2 responded to the survey for a response rate of 13.3%. With limited response any analysis is limited. The below are the prompts for Question #7 followed by the results in Figure 1.

#7 I believe I have improved in the following areas since taking this Reading class (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).

1. *Reading college textbooks*
2. *Reading novels*
3. *Reading for fun*
4. *Understanding what I read*
5. *Expanding my vocabulary*

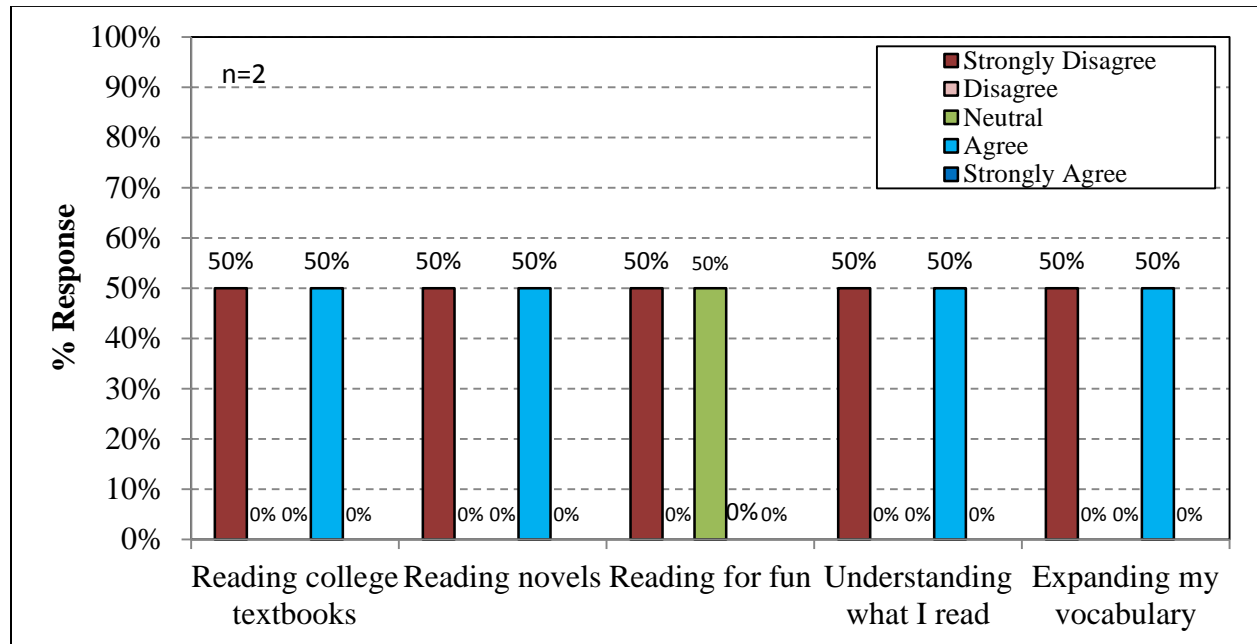


Figure 1. Responses to Question #7 "I believe I have improved in the following areas since taking this reading class."

The following are the prompts for Question #8 followed by results in Figure 2.

#8 I benefited from the following aspects of the Academic Support Center for Reading this semester (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).

1. *The resources available in the Center*
2. *The instructional assistants*
3. *The access to computers*
4. *The programs on the computers*
5. *The hours the Center was open and available to me*

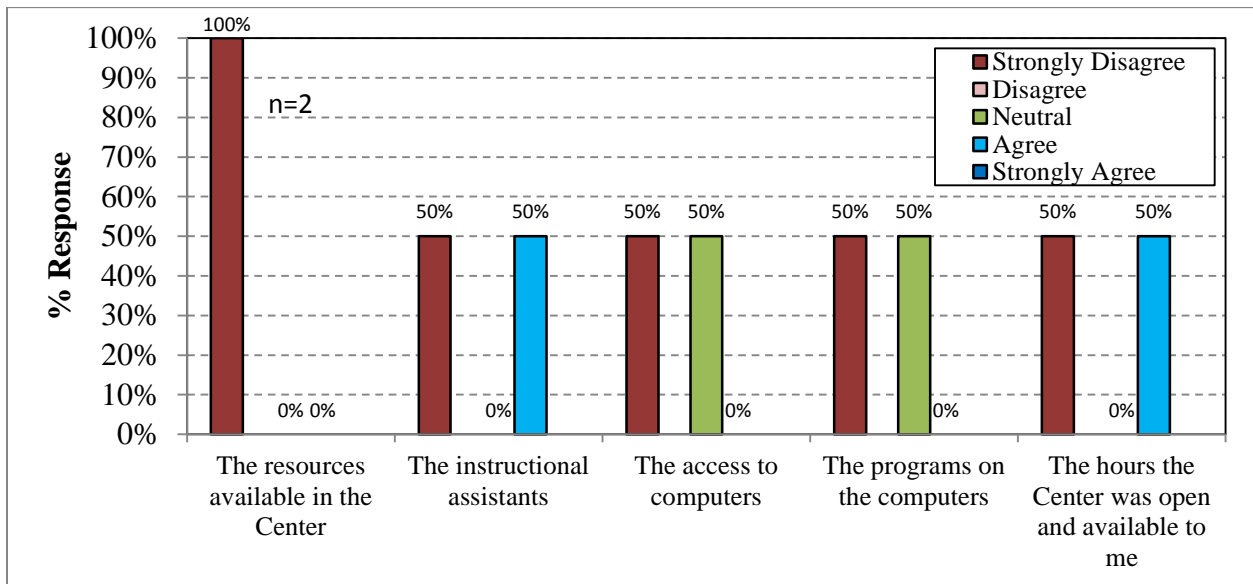


Figure 2. Responses to Question #8 "I benefited from the following aspects of the Academic Support Center for Reading this semester."

The following are the prompts for Question #9 followed by results in Figure 3.

#9 I was satisfied with the following aspects of my Reading class this semester (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).

1. *The novel or stories we read in class*
2. *The information on the course syllabus*
3. *The course textbook*
4. *The homework assigned*
5. *The number of tests*
6. *The length of time of each class*
7. *The frequency of class meetings*
8. *The pace of the course*

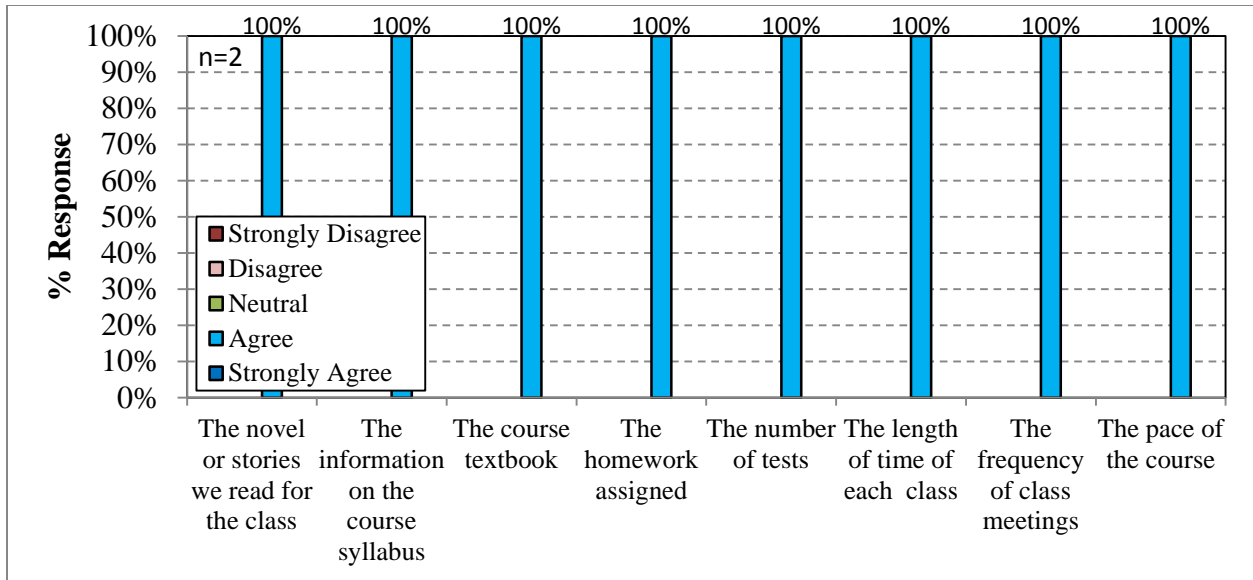


Figure 3. Responses to Question #9 "I was satisfied with the following aspects of my Reading class this semester."

The following are the prompts for Question #10 followed by results in Figure 4.

#10 This Reading course prepared me for: (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).

1. The textbook reading I will do in college
2. The expectations of college courses
3. The time management I must have in college
4. The skills I need to take tests in college
5. The technology used in college classes

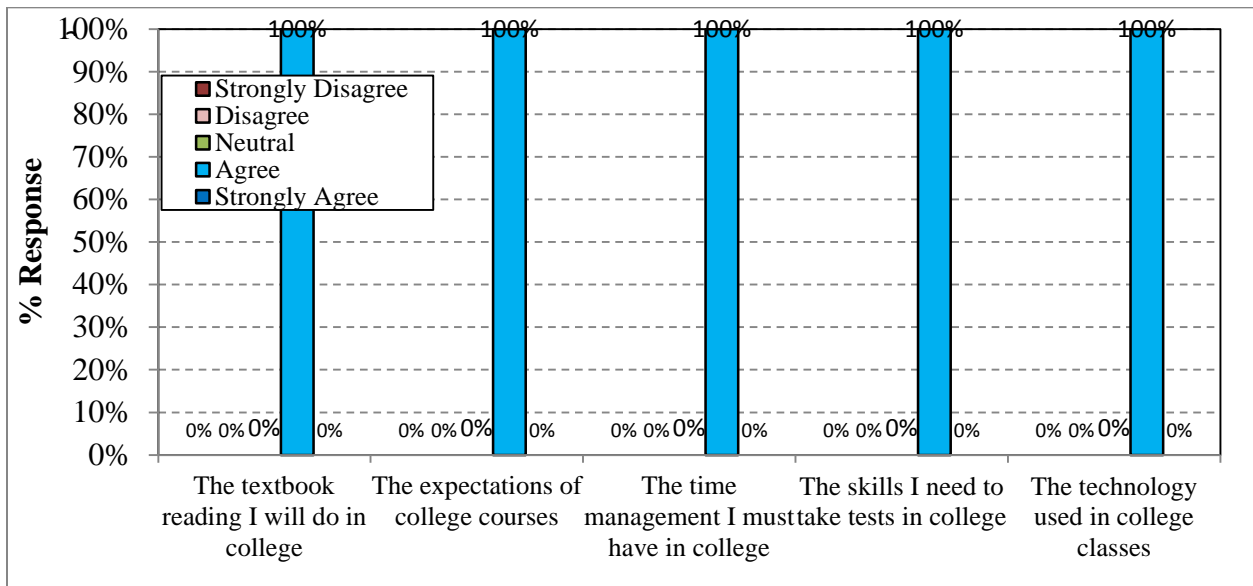


Figure 4. Responses to Question #10 "This Reading course prepared me for:"