Developmental Achievement & Student Satisfaction Reports Spring 2016

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* reviewed achievement to determine if there is any significant difference across developmental strategies (Compressed and Modularized).

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* use a defined course outcome in AY 2015-2016 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, Contextualized, 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

English Assessment Report – Spring 2016

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

1 Introduction

Fall 2014 marked the beginning of a new assessment plan for the English Department of Florida SouthWestern State College (FSW) in three courses: ENC 0022 *Writing for College Success*, ENC 1101 *Composition I*, and ENC 1102 *Composition II*. For spring 2016, assessment will include ENC 0022 while both ENC 1101 and ENC 1102 undergo departmental discussions based on the results of fall 2015 assessment before data collection resumes during the fall term. The planned assessment practice for ENC 0022 continues in spring 2016 in which instructors use a common rubric with seven identified rubric dimensions using data collected from all course sections for ENC 0022 are assessed. Baselines set in place following fall 2014 analysis and discussion 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 ENC 0022

2.1 Learning Objectives & Descriptive Statistics

Using common rubric criterion as an assessment method, the FSW English faculty defined multiple areas of interest for evaluation based on core outcomes for the course. Those outcomes include:

- 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.
- Establish a substantive claim, link claims to relevant evidence, and acknowledge competing arguments, gather information needed, and accurately incorporate source material into their own writing to avoid plagiarism.
- Identify and correctly use proper conventions for sentence grammar and avoid illogical shifts in pronouns and verbs in their own writing and on tests.
- Identify and use proper conventions for spelling, capitalization, and punctuation in their own writing and on tests.
- Identify and correctly use the conventions of a variety of sentence structures and will be able to avoid sentence fragments, comma splices, and fused sentences in their own writing and on tests.
- Identify and write effective topic sentences and thesis statements that address task and audience and use logical structure, support, and transitional devices for expository and persuasive purposes.

2.1.1 Learning Objectives

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. The English department has identified a target statistic for measurement purposes (SLO1) of measuring the percentage of artifacts scoring a 2 or greater.

For the spring 2016 assessment, 99 artifacts were collected for ENC 0022 from 10 of 10 course sections. The lowest scoring rubric dimension for percentage of artifacts scoring a 2 or greater is Research at 87%. This is consistent with fall 2015 results in which the Research dimension was also at 87%. All other dimensions exhibit percentage of 94% or higher (Table 1). For a visual comparison of scores by dimension, see Figure 1.

Rubric Score	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research
Developing or higher	*94%*	*99%*	*100%*	*98%*	*95%*	*97%*	*87%*
4	47%	43%	44%	35%	26%	21%	27%
3	36%	40%	39%	41%	48%	52%	37%
2	10%	16%	16%	22%	20%	23%	22%
1	6%	1%	0%	2%	5%	3%	12%
0	0%	0%	0%	0%	0%	0%	0%

Table 1. Percentage of student achievement level by rubric dimension (includes percentage of students scoring in developmental level or higher as per SLO) for ENC 0022.

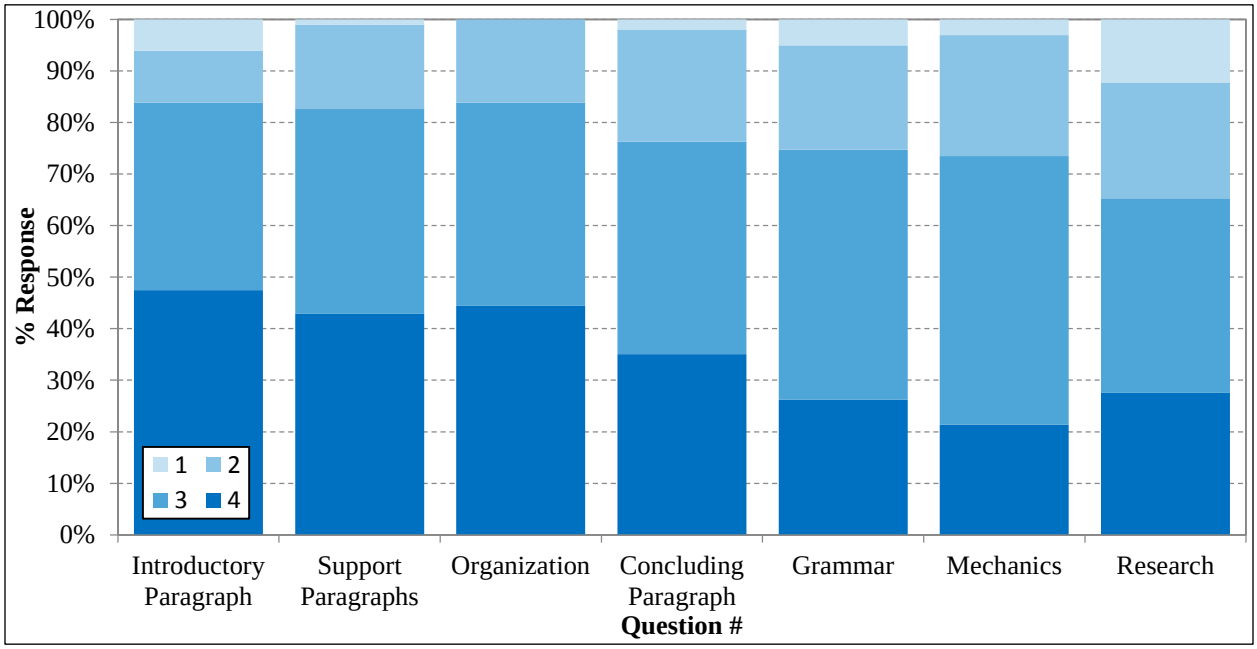

Figure 1. ENC 0022 distribution of rubric scores by dimension.

2.1.2 Descriptive Statistics & Longitudinal Studies

Descriptive statistics for ENC 0022 artifacts can be found in Table 2. A histogram of artifact scores for all 99 artifacts is shown in Figure 2. Distribution of artifact scores is bimodal centered on 21/28 and 25/28, and is moderately negatively skewed, meaning scores are shifted towards the higher range.

To describe the behavior of the rubric dimensions based on overall achievement a color map, or binary raster image was created by calculating the mean scores for each dimension as a function of combined score (Figure 3). To create this image the rubric scores (4, 3, 2, 1, or 0) for each artifact was grouped based on combined raw rubric score (7 dimensions x maximum rubric level of 4 = 28 overall points). The color represents the mean rubric score achieved in each dimension based on the combined score as shown in the x-axis.

	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research	TOTAL
n	99	98	99	97	99	98	99	98
Max	4	4	4	4	4	4	5	28
Min	1	1	2	1	1	1	1	11
Median	3	3	3	3	3	3	3	22
Mode	4	4	4	3	3	3	3	25
Mean	3.3	3.2	3.3	3.1	3.0	2.9	2.8	21.5
Standard deviation	0.87	0.76	0.73	0.80	0.82	0.76	1.00	4.63
Skewness	-1.08	-0.59	-0.50	-0.42	-0.49	-0.30	-0.33	-0.62
Kurtosis	0.53	-0.55	-0.97	-0.68	-0.18	-0.21	-0.74	-0.43

Table 2. Descriptive statistics for ENC 0022 common course assessment.

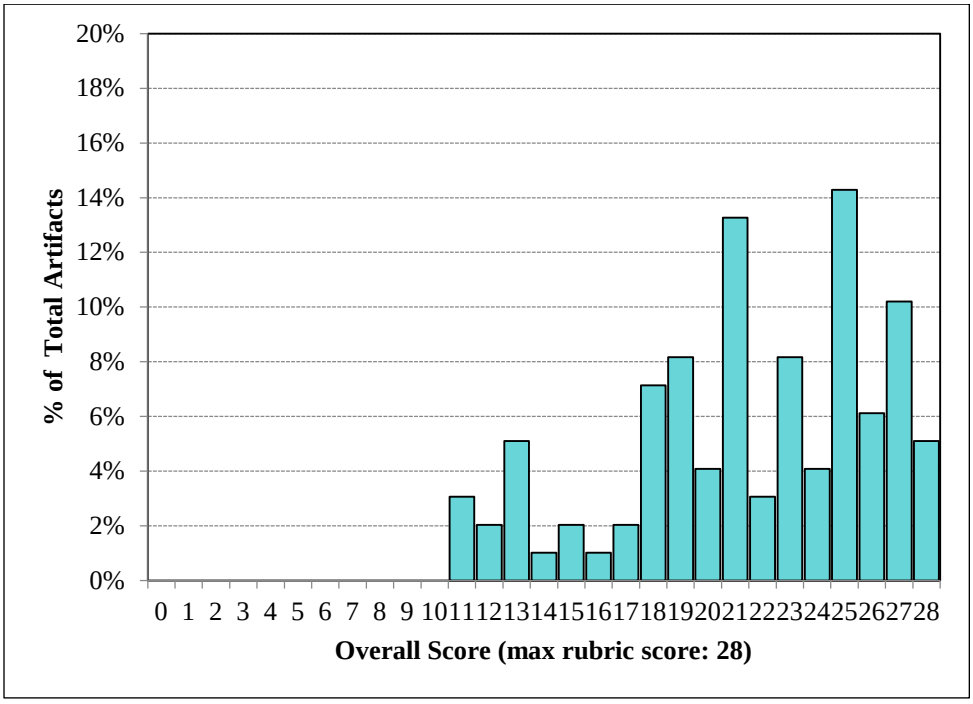

Figure 2. Overall score distribution for ENC 0022 artifacts (spring 2016 term).

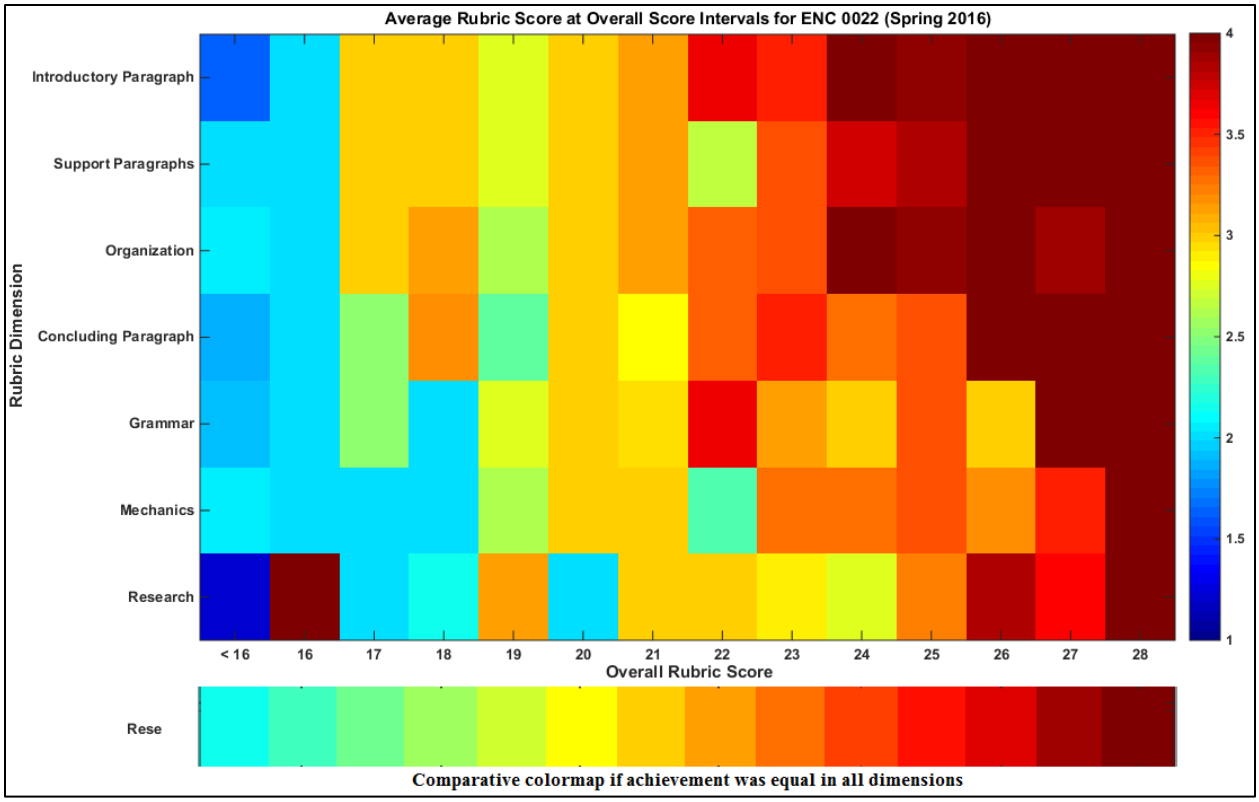

Figure 3. (Top) Colormap of mean scores for each rubric dimension (range: 0-4) based on overall rubric score (combined rubric score of all dimensions, max=28) for ENC 0022. (Bottom) Comparison rubric dimension if dimension score is the same as overall (i.e. artifact overall score is equally distributed across all sections). A rubric dimension with hotter colors (reds/yellows) means that dimension achievement exceeds the overall score and is an area of strength. An exam section with colder colors (blues/greens) means that section achievement is lower than the overall score and is therefore an area of weakness.

A review of the colormap in Figure 2 shows that between 20/28 and 22/28 (approximately 75% overall score) all dimensions fair relatively equally (hot colors fairly evenly distributed). When overall rubric scores range above this, the Grammar and Mechanics dimensions lag somewhat behind all other dimensions. For example, at an overall score of 26/28, the Grammar and Mechanics dimensions exhibit average scores of 3.0/4 and 3.2/4, respectively, while other dimensions range from 3.8/4 to 4/4. From a student performance perspective, the average students tend to be equally strong in all dimensions while over achieving students tend to again lag in Grammar and Mechanics. In short, there is an upper limit to which even the best students do not attain for Grammar and Mechanics.

If we review spring 2016 colormap with reference to spring 2015, consistent patterns emerge (Figure 4; for comparison purposes fonts are small to allow for side-by-side imaging, please refer to Figure 3 for y-axis rubric dimension labels). Each term exhibits strong (near 4/4) rubric dimension scores for Introductory Paragraph, Support Paragraphs, Organization, and Concluding Paragraph being achieved when overall scores are 22/28 and higher. Each term also shows equally strong dimensions in all areas when overall scores are 21/28 and lower. And finally, each term shows Grammar and Mechanics lagging behind other dimensions when overall scores are 26/28 and higher.

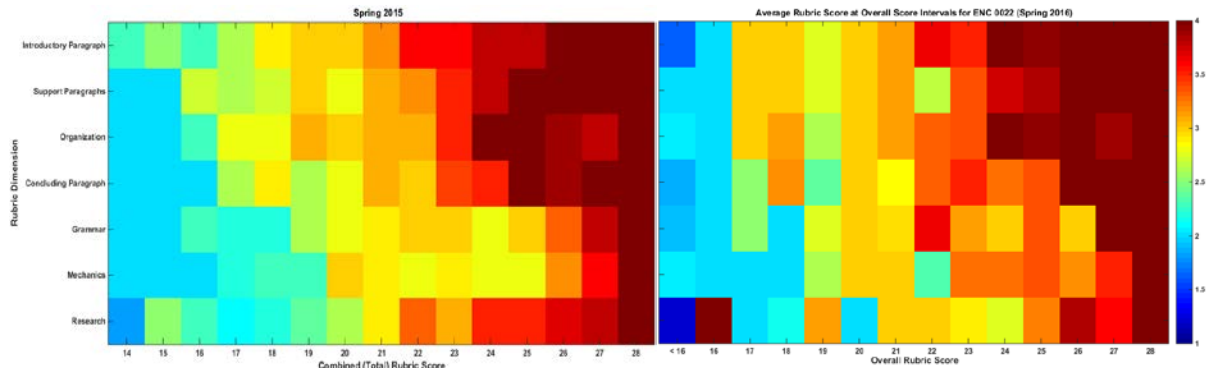

Figure 4. Side-by-side comparison of spring 2015 colormap (left) with spring 2016 colormap (right).

A comparison of spring 2016 mean scores with past results is shown in Figure 5 below. Note that comparison from fall-to-spring is less useful as assessment reports across multiple course level and program level assessments at FSW typically exhibit substantial differences from fall to spring term and are most effectively interpreted when comparing fall-to-fall terms and spring-to-spring terms (see http://www.fsw.edu/facultystaff/assessment/history for examples).

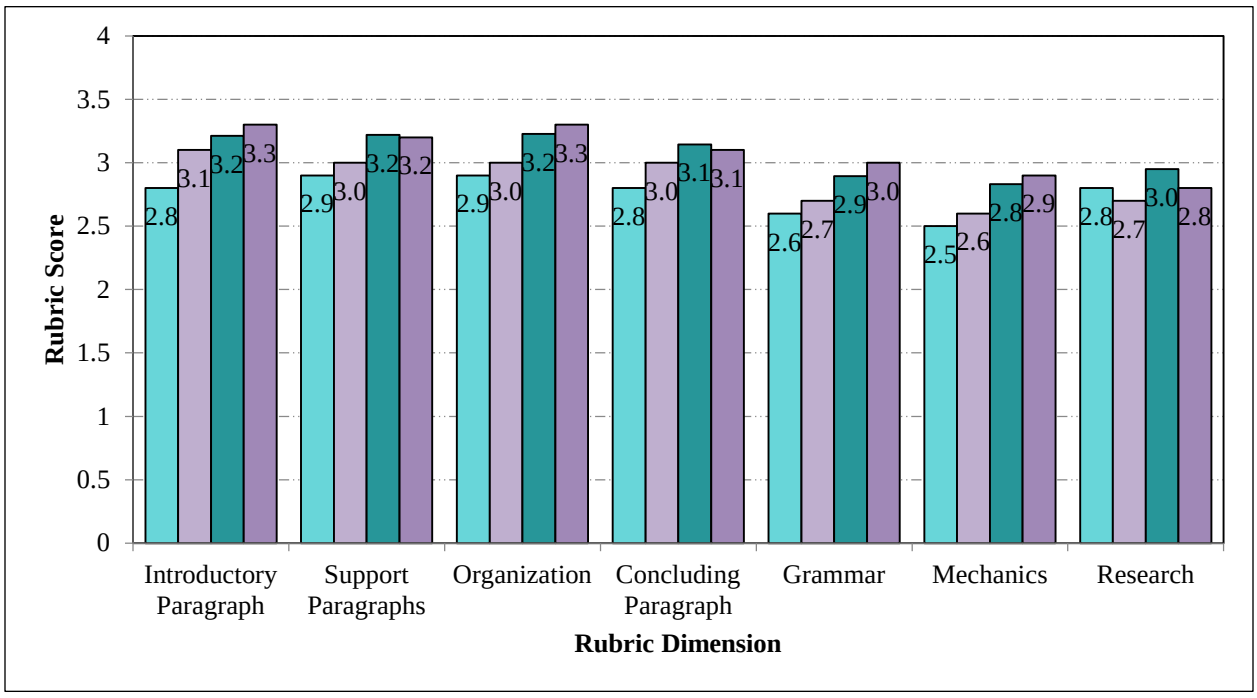

Figure 5. Comparison of mean scores for ENC 0022 through time beginning fall 2014 (light teal), spring 2015 (light purple), fall 2015 (dark teal), and spring 2016 (dark purple).

2.2 Comparisons by Site, Format, and Student Type

2.2.1 Dual Enrollment to non-Dual Enrollment Comparison

ENC 0022 is not offered as a dual enrollment (offsite) course nor is it offered to dual enrollment students onsite and so no comparison study between dual enrollment artifacts and traditional artifacts can be made.

2.2.2 Online to Traditional Comparison

ENC 0022 is not offered as an online course and so no comparison study between online artifacts and traditional artifacts can be made.

2.2.3 Comparison by Site/Campus

Of the 99 artifacts collected from ENC 0022, 6 originated from the Charlotte campus, 12 from the Collier campus, 2 from the Hendry-Glade Center, and 79 from the Thomas Edison (Lee) campus. Scores by rubric dimension varied greatly across campuses. A comparison of mean scores by rubric dimension is provided in Table 3.

	Introductory Paragraph	Support Paragraphs	Organization	Concluding Paragraph	Grammar	Mechanics	Research
Charlotte	**4.0**	**3.8**	3.7	**3.3**	**3.2**	2.8	**3.8**
Collier	2.7	2.8	2.9	2.6	2.7	2.7	3.1
Hendry-Glades	3.5	3.5	**4.0**	2.5	3.0	3.0	3.0
Thomas Edison (Lee)	3.3	3.3	3.3	3.2	3.0	**3.0**	2.7

Table 3. Comparison of mean scores by site for ENC 0022. Bold denotes highest mean score in that dimension among all sites.

Charlotte campus is consistently higher compared to other sites exhibiting the highest mean score in 5 of 7 dimensions. However, the sample size is limited (n=6). A plot comparing descriptive statistics of the combined (overall) scores by site is presented in Figure 6. There is extensive overlap between sites although limited data at both Charlotte and Hendry-Glades limit interpretation.

A one-way analysis of variance was used to compare means of the combined rubric scores at each site. Results of the ANOVA exhibit no statistically significant difference between sites (see Table 4). Therefore, we cannot reject the null hypothesis that the mean 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. However, such low sample sizes make any analysis of variance results suspect (Brown and Forsythe, 1974).

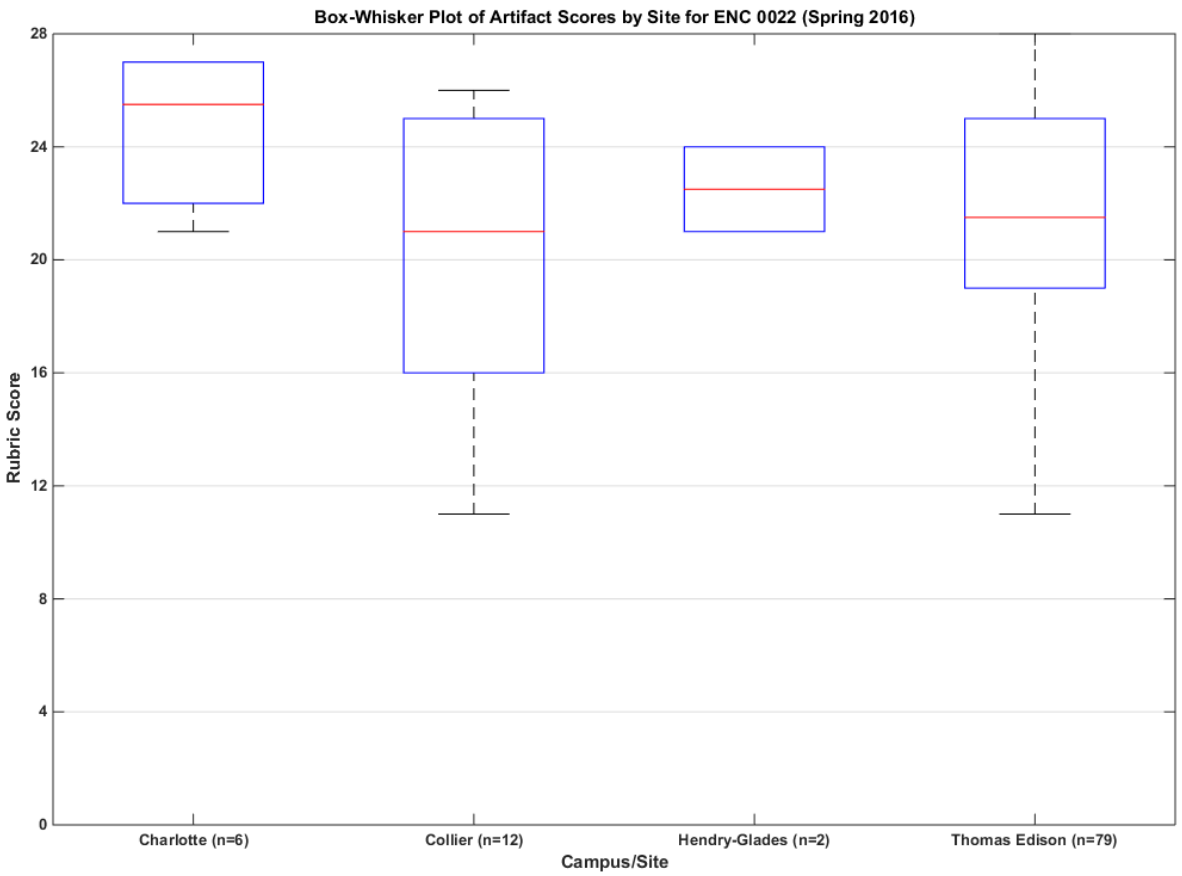

Figure 6. Box-Whisker plot of scores distributed by site for ENC 0022. Red line depicts median score. Upper and lower box boundaries indicate 75% quartile and 25% quartile (box represents central 50% of the scores). Vertical lines represent remaining scores outside central 50% that are not outliers. Red '+'s denote outliers.

Source of Variation	Sum of squared differences	df	Mean Squares	F_{obs}	p-value	F_{crit}
Between Sites	87.8	3	29.3	1.39	0.250	2.70
Within Sites	2018.4	96	21.0			
Total	2106.2	99				

Table 4. Results of one-way ANOVA of combined rubric scores at each site for ENC 0022.

2.2.4 Mini-term to Full-term Comparison

ENC 0022 was not offered as a mini-term course and so no comparison study between mini-term artifacts and full-term artifacts can be made.

3 ENC 1101

Course assessment for ENC 1101 follows a procedure of data collection in fall term only followed by departmental discussions in spring.

4 ENC 1102

Course assessment for ENC 1102 follows a procedure of data collection in fall term only followed by departmental discussions in spring.

5 CONCLUSIONS

FSW's English Department assessment plan includes three courses: ENC 0022 *Writing for College Success*, ENC 1101 *Composition I*, and ENC 1102 *Composition II*. For spring 2016, assessment will include ENC 0022 while both ENC 1101 and ENC 1102 undergo departmental discussions based on the results of fall 2015 assessment before data collection resumes during the fall term. The department has historically used a benchmark of percentage of students scoring 2 or higher in rubric dimensions as a means to measure achievement in the courses.

A drilldown of ENC 0022 results are as follows:

1. All seven rubric dimensions had > 87% achievement at level 2 or higher. The lowest dimension was Research while all other dimensions exceeded 94%.
2. Distribution of artifact scores is bimodal centered on 21/28 and 25/28, and is moderately negatively skewed, meaning scores are shifted towards the higher range.
3. In a study comparing rubric achievement based on overall score, average students tend to be equally strong in all dimensions while over achieving students tend to again lag in Grammar and Mechanics.
4. In a longitudinal study, results exhibit improvement across all areas.
5. No comparison of dual enrollment to traditional artifacts was completed because no dual enrollment sections of the course were offered.
6. No comparison of online to traditional artifacts was completed because no online sections of the course were offered.
7. In a cross-campus comparison, scores varied greatly across rubric dimensions. Charlotte campus is consistently higher compared to other sites exhibiting the highest mean score in 5 of 7 dimensions. There is extensive overlap between sites although limited data at both Charlotte and Hendry-Glades limit interpretation.
8. No comparison of mini-term artifacts and full-term artifacts was completed because no mini-term sections of the course were offered.

No drilldown of results for ENC 1101 is reported because the course follows a procedure of data collection in fall term only followed by departmental discussions in spring. Therefore, no results or analysis is reported here.

No drilldown of results for ENC 1102 is reported because the course follows a procedure of data collection in fall term only followed by departmental discussions in spring. Therefore, no results or analysis is reported here.

6 REFERENCES

Brown, M.B., Forsythe, A.B. 1974. The small sample behavior of some statistics which test the equality of several means. Technometrics, 16(1), 129-132.

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.

Elder, L, and Paul, R. 2007. Consequential Validity: Using Assessment to Drive Instruction. In: Foundation For Critical Thinking. Retrieved from http://www.criticalthinking.org/pages/consequential-validity-using-assessment-to-drive-instruction/790.

Section 2

ENC 0022 Final (Mastery) Exam Assessment Report – Spring 2016

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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 *Writing for College Success*. The following report details the results for the final exam for ENC 0022 for the spring 2016 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 99 students were reported for spring 2016 with 8 of 10 sections reporting objective sections and 10 of 10 reporting written sections. 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.

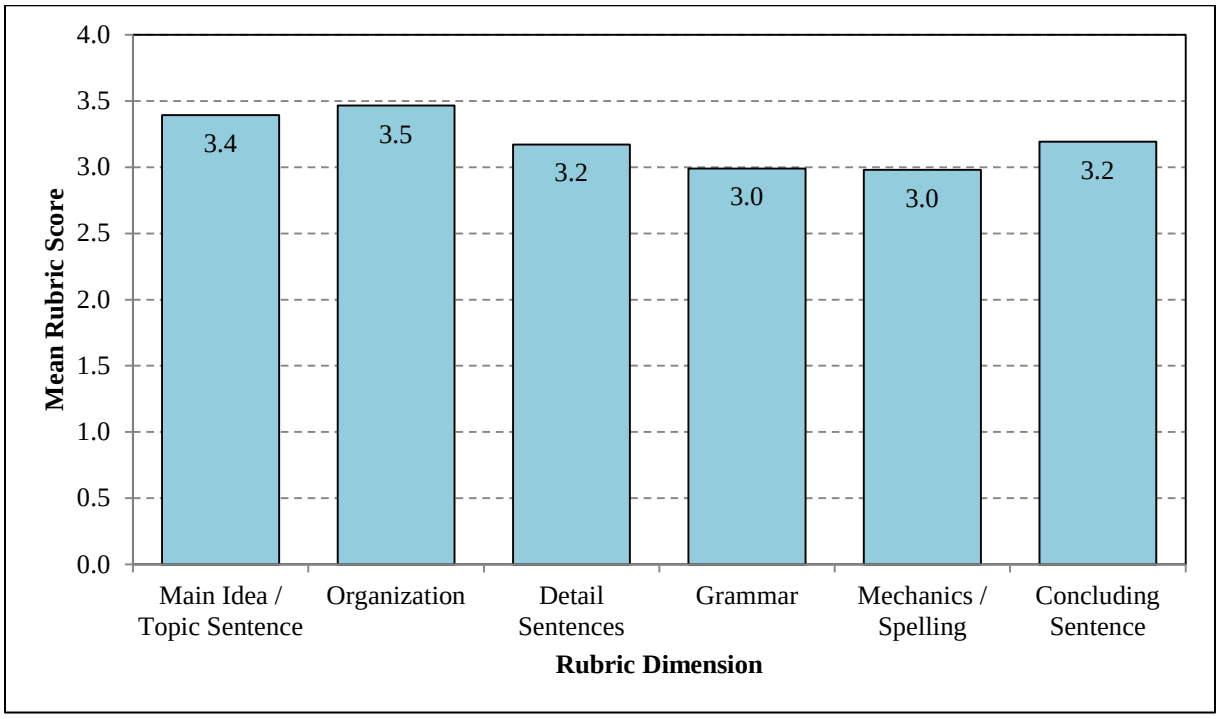

Figure 1. ENC 0022 Final Exam written section mean rubric scores for spring 2016.

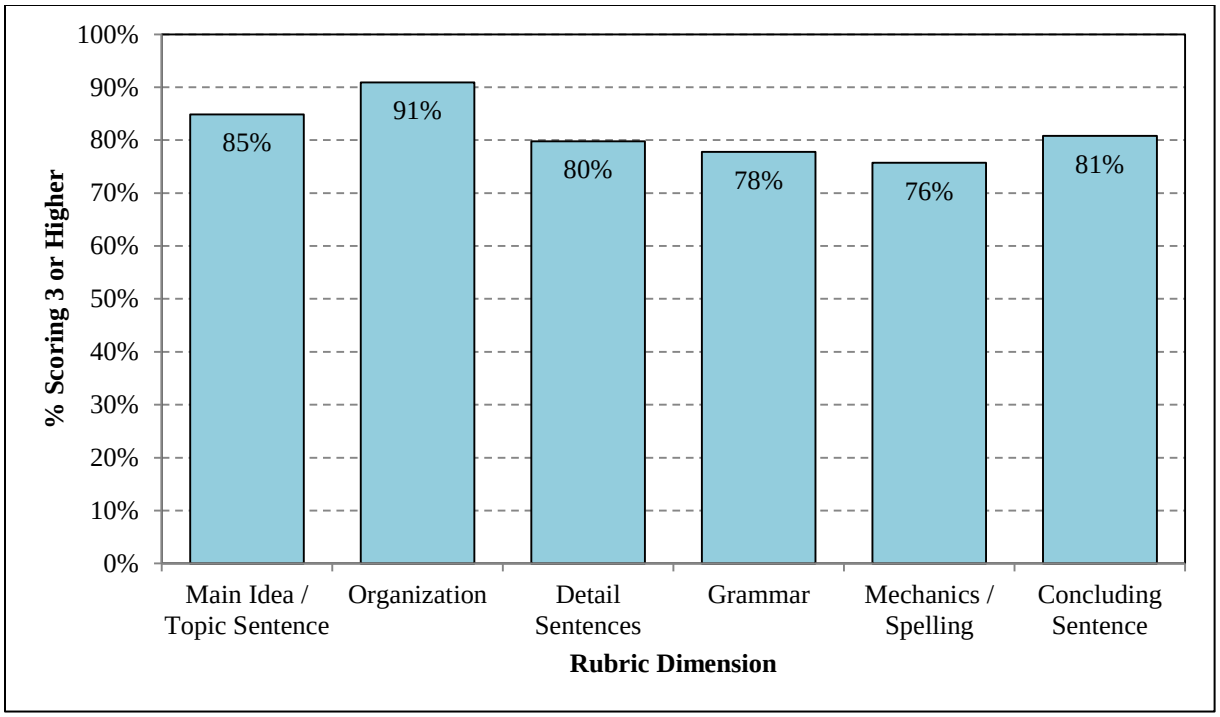

Figure 2. Percentage of spring 2016 artifacts scored 3 or higher on written section of ENC 0022 final exam.

While 99 artifacts were reported for the written section of the exam, 78 were reported for the objective section. The mean scores for each 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 be statistically significantly different ($t(178)=4.86$, $p=2.47\times10^{-6}$). 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.

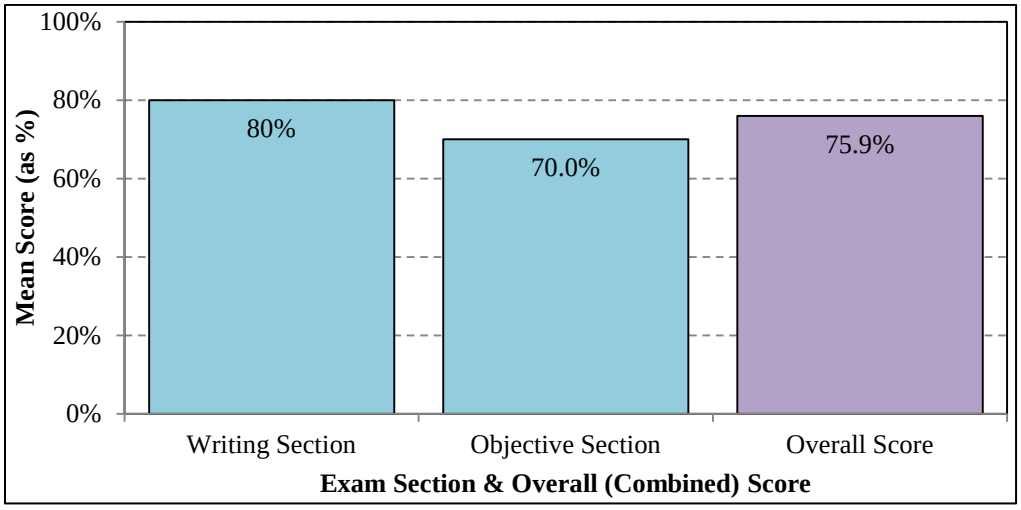

Figure 3. Mean scores by exam section and overall score for the spring 2016 ENC 0022 final exam.

Of the 99 artifacts collected from the final exam, 96 originate from the compressed learning strategy version of the course while 3 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 due to low sample size[5].

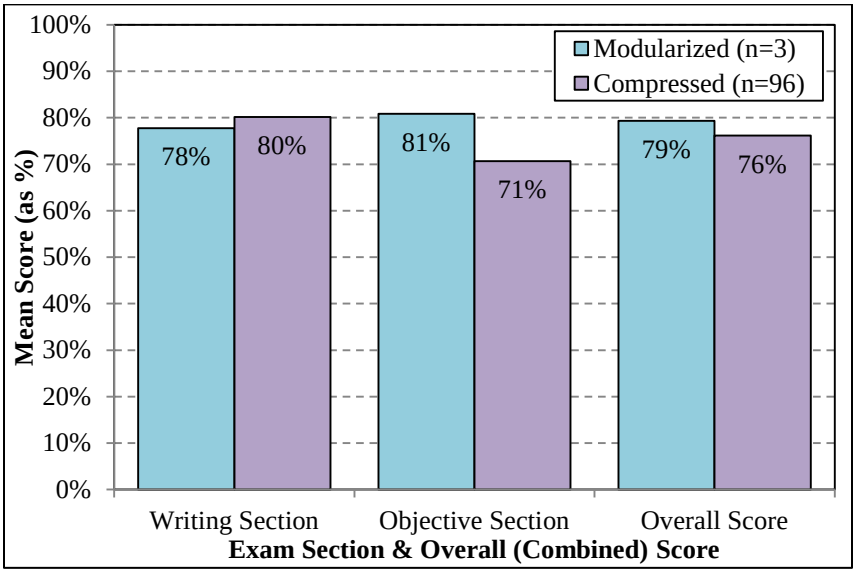

Figure 4. Comparison of spring 2016 exam section and overall scores by learning strategy.

Success rates based on achievement at the 70% level by learning strategy were compiled and are shown in Figure 5. The percentage of artifacts scoring 70% or better on the final exam originating from modularized sections is 100%, although sample size was only n=3. The percentage of artifacts scored 70% or better on the final exam originating from compressed sections is 73%.

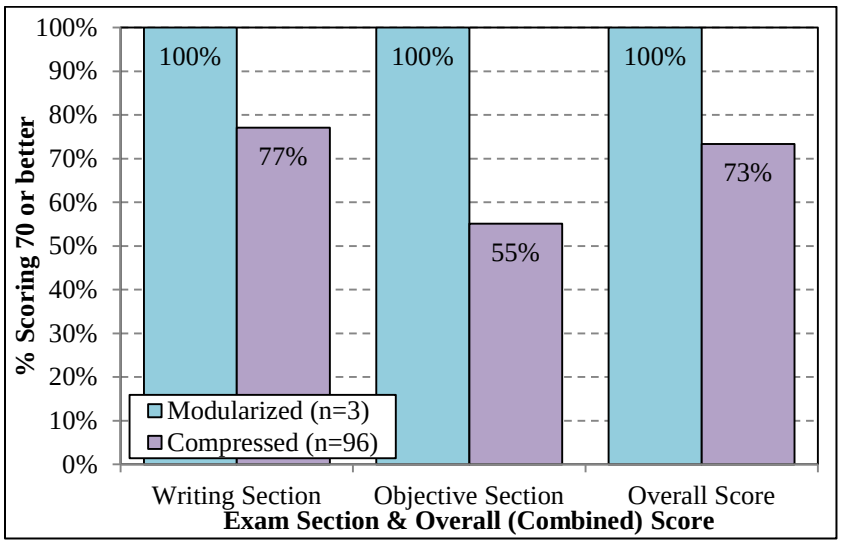

Figure 5. Spring 2016 ENC 0022 final exam success rate (≥70%) by section and learning strategy.

A longitudinal study exhibits a consistent level of achievement overall with the exception of the summer 2015 term. This trend is also evident among compressed learning strategy sections as modularized enrollment remains low enough to be fairly inconsequential in influencing overall rates.

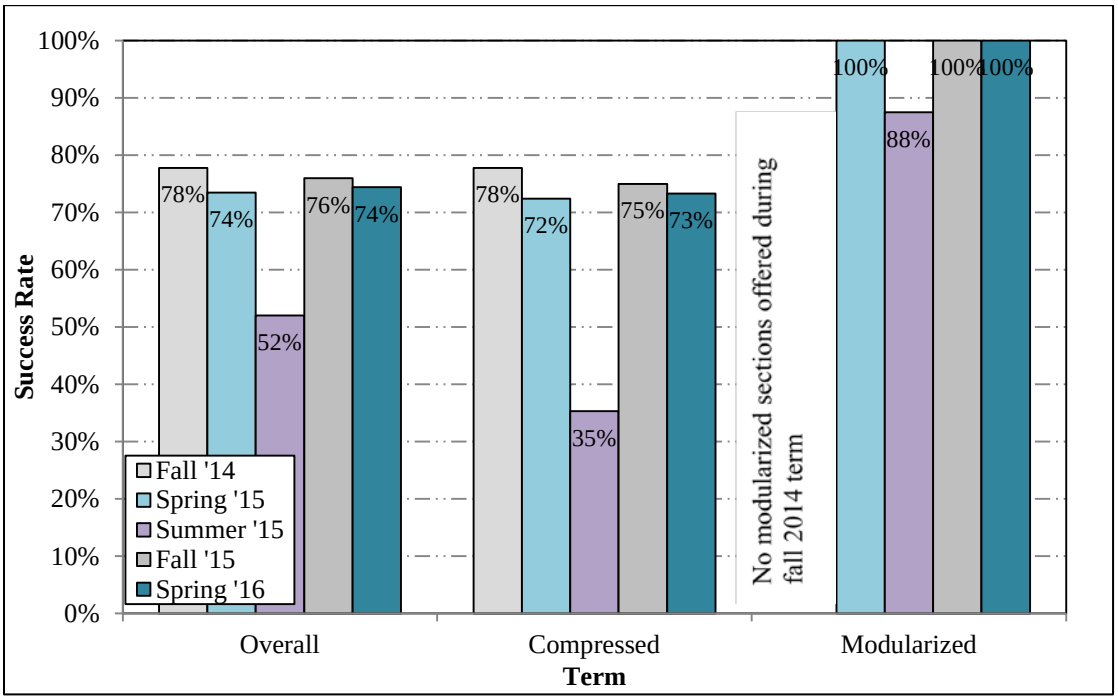

Figure 6. Comparison of ENC 0022 final exam success rates over time. Success rate is achievement at 70% or higher.

[1]Davis, J.C. 1973. Statistics and Data Analysis in Geology. John Wiley & Sons, New York, New York, 564 pp.
[2]McDonald, J.H. 2009. Handbook of Biological Statistics (2nd ed.). Sparky House Publishing, Baltimore, Maryland.
[3]Siegel, S. 1956. Nonparametric statistics for the behavior sciences. McGraw-Hill, New York, New York, 312 pp.
[4]Wilkinson, L. 1999. APA Task Force on Statistical Inference. Statistical Methods in Psychology Journals: Guidelines and Explanations. American Psychologist 54 (8), 594–604.
[5]de 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 – Spring 2016

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 spring 2016 term.

Of the 135 students enrolled in ENC 0022 during spring 2016, 19 responded to the survey for a response rate of 14%, down from 15% in fall 2015. Of the 19 respondents, 74% were enrolled in the traditional classroom learning strategy, up from 72% in the fall, while 28% were enrolled in the computer assisted learning strategy.

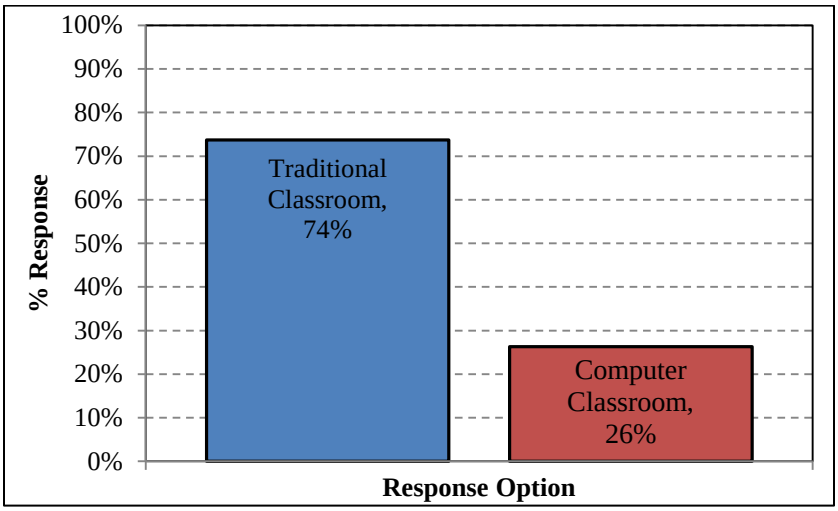

Figure 1. Response rate by learning strategy.

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*

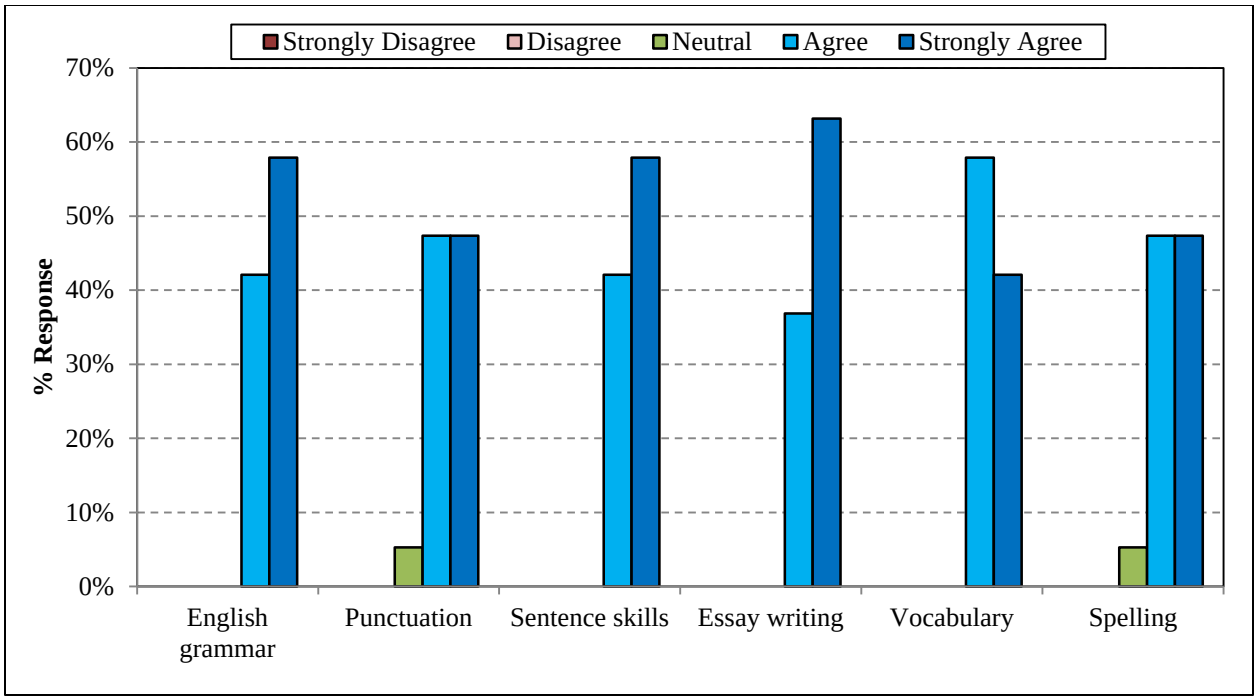

Figure 2. Responses to Question #7 " I believe I have improved in the following areas since taking this English class."

All six areas exhibit positive responses (Agree or Strongly agree) of 95%, up from the lowest in fall 2015 of Q7-4 (76%). No question exhibits a negative response rate (Disagree or Strongly disagree) at all.

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*

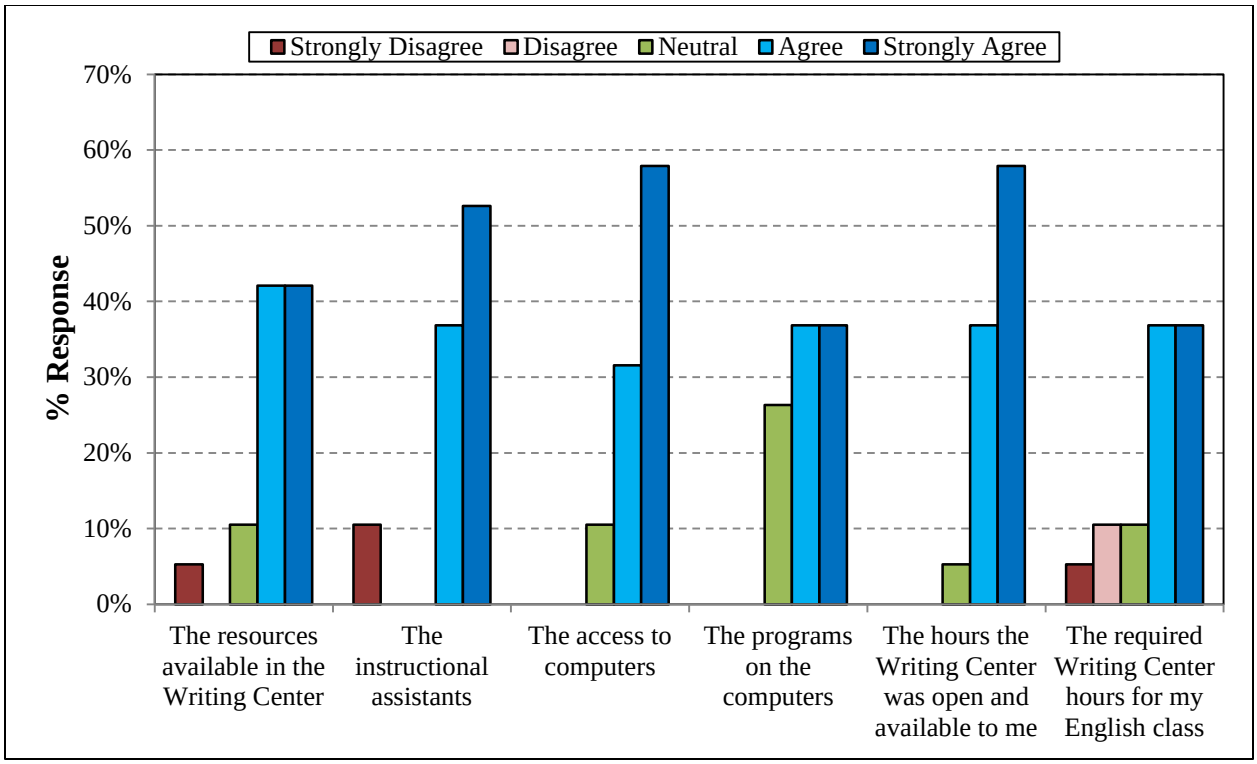

Figure 3. Responses to Question #8 "I believe I benefited from the following aspects of the Academic Support Writing Center this semester."

All six areas exhibit positive responses (Agree or Strongly agree) of 70% or better. Q8-4 exhibits a positive response rate of greater than 90%. The largest negative response rate (Disagree or Strongly disagree) is for Q8-4, at 16%, up from the highest in fall 2015 of 6%.

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*

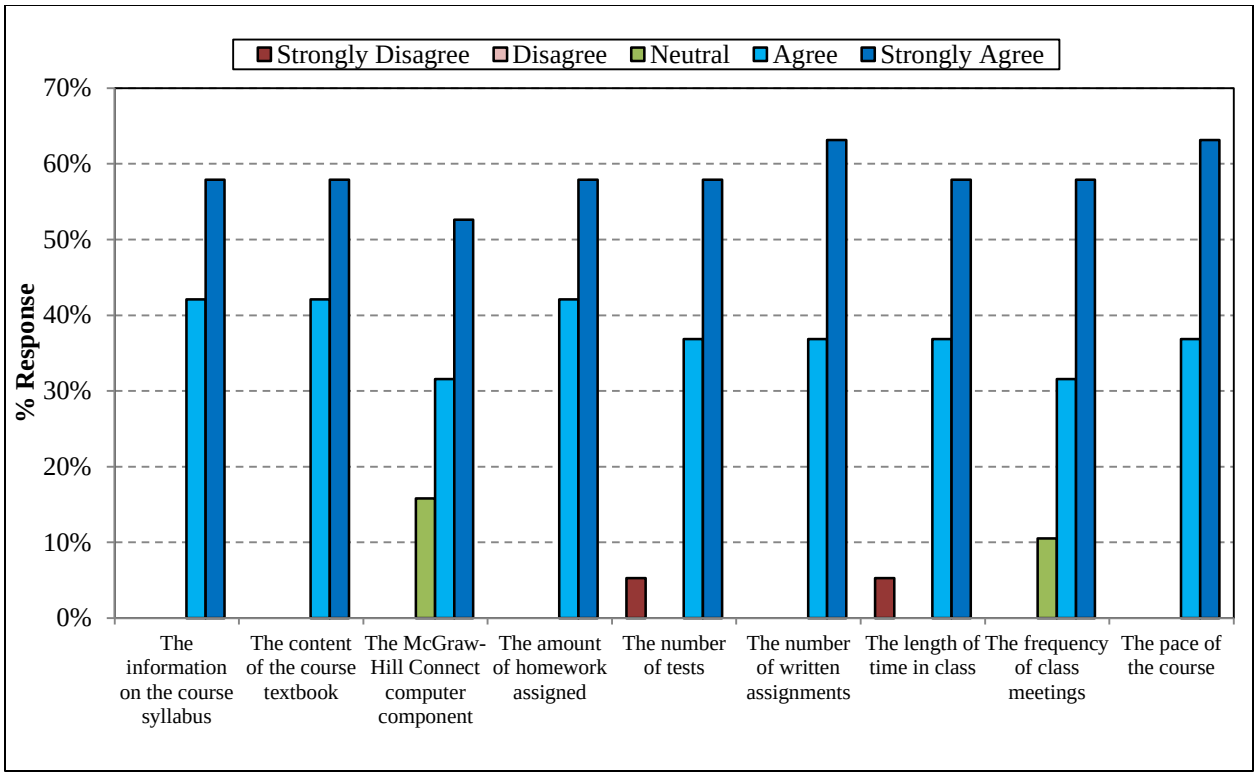

Figure 4. Responses to Question #9 "I was satisfied with the following aspects of my English class this semester."

All nine areas exhibit positive responses (Agree or Strongly agree) of 85% or better, up from a minimum of 70% in fall 2015. Most questions exhibit positive responses of 100%.

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*

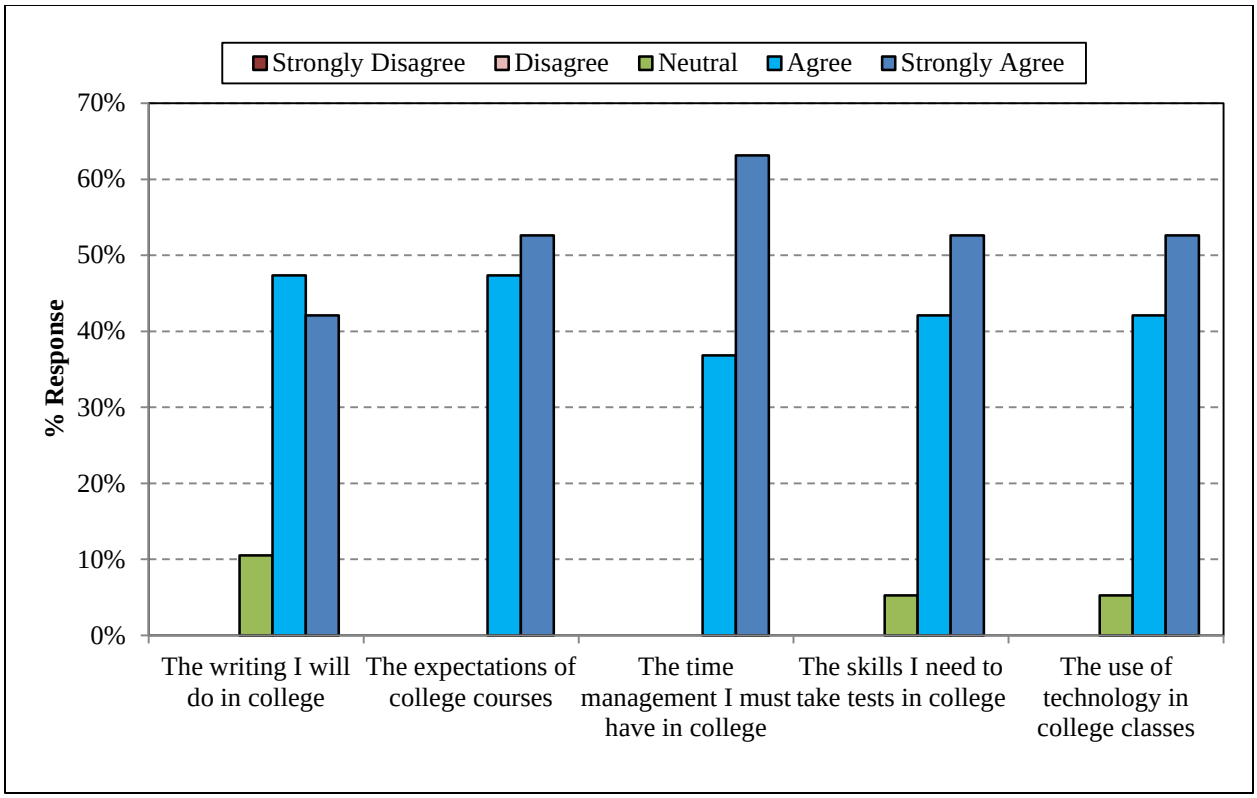

Figure 5. Responses to Question #10 "This English course prepared me for:"

All five areas exhibit positive responses (Agree or Strongly agree) of 88% or better. Three of the five questions exhibit positive response rates of 100%.

A tabulation of positive responses (Strongly agree or Agree) is included below based on learning strategy (Table 1). However, note that of the 19 responses, 14 reported from compressed sections while only five reported from modularized sections. As a result, statistical significance tests yield limited accuracy (de Winter, 2013) and so were not conducted.

	Traditional (Compressed)	Modularized		Traditional (Compressed)	Modularized
Q7-1	100%	80%	**Q9-1**	100%	100%
Q7-2	100%	60%	**Q9-2**	100%	80%
Q7-3	100%	80%	**Q9-3**	79%	100%
Q7-4	100%	80%	**Q9-4**	100%	100%
Q7-5	100%	100%	**Q9-5**	100%	80%
Q7-6	100%	80%	**Q9-6**	100%	100%
Q8-1	86%	80%	**Q9-7**	100%	80%
Q8-2	93%	80%	**Q9-8**	93%	100%
Q8-3	93%	80%	**Q9-9**	100%	100%
Q8-4	79%	80%	**Q10-1**	86%	100%
Q8-5	93%	100%	**Q10-2**	100%	100%
Q8-6	79%	60%	**Q10-3**	100%	80%
			Q10-4	93%	100%
			Q10-5	93%	100%

Table 1. Positive survey response (Strongly Agree or Agree) by learning strategy. Shaded cells denote higher of the two learning strategies. Statistical significance tests were not completed due to low sample size.

Table 2 shows positive response rates (Agree or Strongly agree) for each of the survey prompts over time beginning fall 2014 through spring 2016. Note that comparison from fall-to-spring is less useful as assessment reports across multiple course level and program level assessments at FSW typically exhibit substantial differences from fall to spring term and are better interpreted from fall-to-fall and spring-to-spring (see http://www.fsw.edu/facultystaff/assessment/history for further details). Of the 26 questions, 21 exhibit increases while five exhibit increases.

	Fall 2014 n=65	Spring 2015 n=35	Summer 2015 n=11	Fall 2015 n=36	Spring 2016 n=19
Question 7 – Prompt: I believe I have improved in the following areas since taking this English class.					
English grammar	69%	94%	55%	85%	**100%**
Punctuation	75%	91%	45%	85%	**95%**
Sentence skills	77%	97%	45%	85%	**100%**
Essay writing	75%	97%	55%	91%	**100%**
Vocabulary	65%	88%	55%	76%	**100%**
Spelling	67%	81%	45%	85%	**95%**
Question 8 – Prompt: I benefited from the following aspects of the Academic Support Writing Center this semester.					
The resources available in the Writing Center	75%	78%	91%	80%	**84%**
The instructional assistants	80%	81%	91%	77%	**89%**
The access to computers	80%	91%	91%	74%	**89%**
The programs on the computers	74%	75%	55%	77%	**74%**
The hours the Writing Center was open and available to me	86%	94%	91%	83%	**95%**
The required Writing Center hours for my English class	85%	84%	82%	81%	**74%**
Question 9 – Prompt: I was satisfied with the following aspects of my English class this semester.					
The information on the course syllabus	78%	88%	55%	83%	**100%**
The content of the course textbook	67%	91%	64%	75%	**100%**
The McGraw-Hill Connect computer component	52%	75%	40%	64%	**84%**
The amount of homework assigned	75%	88%	55%	83%	**100%**
The number of tests	75%	91%	64%	83%	**95%**
The number of written assignments	75%	91%	82%	85%	**100%**
The length of time in class	74%	91%	64%	86%	**95%**
The frequency of class meetings	77%	91%	70%	86%	**89%**
The pace of the course	72%	91%	70%	75%	**100%**
Question 10 – Prompt: This English course prepared me for:					
The writing I will do in college	77%	94%	55%	81%	**89%**
The expectations of college courses	77%	88%	55%	81%	**100%**
The time management I must have in college	77%	91%	73%	81%	**100%**
The skills I need to take tests in college	75%	84%	73%	83%	**95%**
The use of technology in college classes	67%	88%	55%	72%	**95%**

Table 2. Positive (Agree or Strongly agree) response rates over time. Increases from spring-to-spring noted in green text, declines in red.

References:

de 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 4

MAT 0057 Final Exam Assessment Report – Spring 2016

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 spring 2016 term.

During fall 2015, 29 course sections were offered. Of those, 26 sections submitted results. In the 26 reporting sections, 173 artifacts from the final exam were collected with 57 originating from the compressed learning strategy version of the course and 116 originating from the modularized learning strategy version of the course. A distribution of the artifact scores can be found in Figure 1. The data exhibit a bimodal distribution with peaks centered on 35/45 (78%) and 39/45 (87%) with a maximum of 45/45 (100%) and minimum of 7/45 (16%).

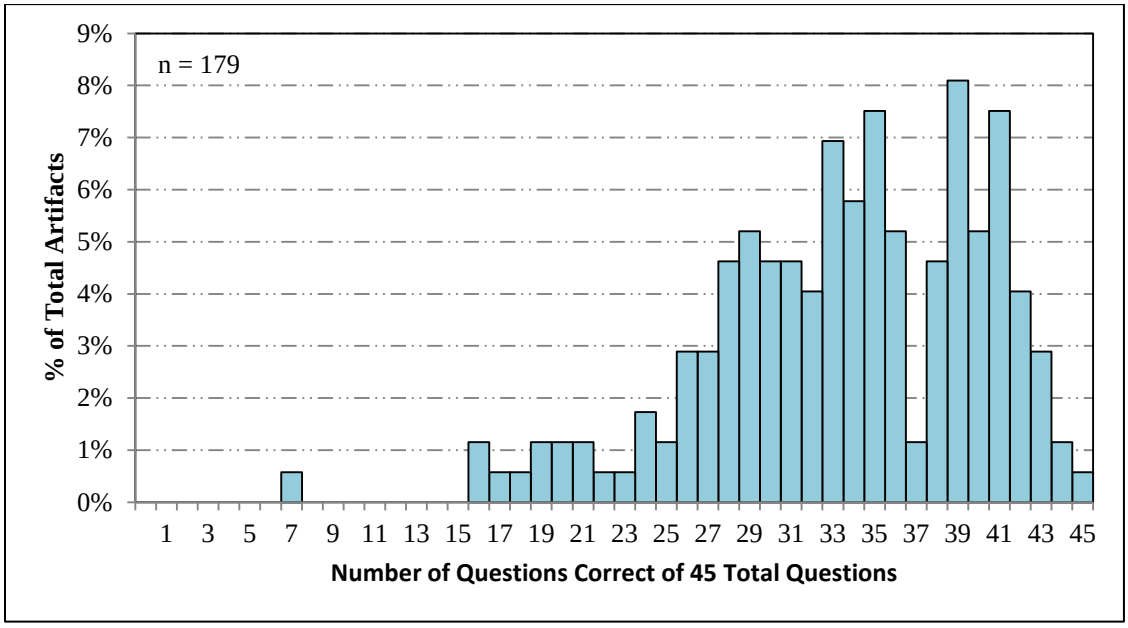

Figure 1. MAT 0057 final exam score distribution for spring 2016.

A comparison of mean scores by learning strategy is shown in Figure 2. 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 not be statistically significantly different ($t(171)=0.817$, $p=0.415$). Therefore we cannot reject the null hypothesis that the difference in the means of the compressed and modularized course sections is equal to 0, and we cannot conclude with 95% confidence that the differences in scores are not solely due to chance.

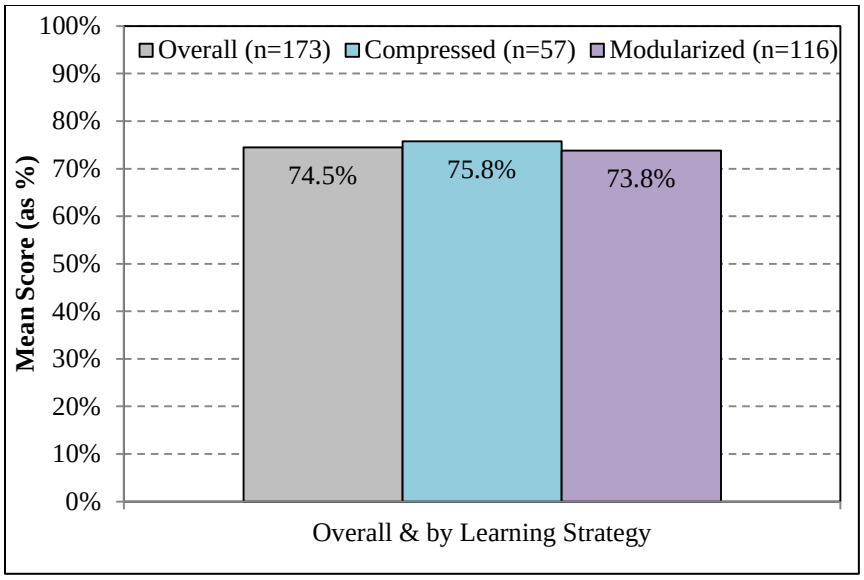

Figure 2. Comparison of MAT 0057 Final exam (mastery exam) mean scores for overall (gray), Compressed (teal), and modularized (purple) for spring 2016.

Success rates based on achievement at the 50%, 70%, and 90% level were compiled (Figure 3). The percentage of artifacts scored 50% or better on the final exam is 95% for those originating from compressed sections (down from 97% in fall 2015), and 92% for those originating from modularized sections (down from 93% in the fall), with an overall rate of 93% from either strategy (down from 95%). The percentage of artifacts scored 70% or better on the final exam is 65% for those originating from compressed sections (the same as fall 2015) and 65% for those originating from modularized sections (down from 67%) with an overall rate of 65% from either strategy (down from 67% in fall 2015). The percentage of artifacts scored 90% or better on the final exam is 19% for those originating from compressed sections (up from 11% in the fall) and 15% for those originating from modularized sections (up from 12% in the fall) with an overall rate of 16% from either strategy (up from 12% in the fall).

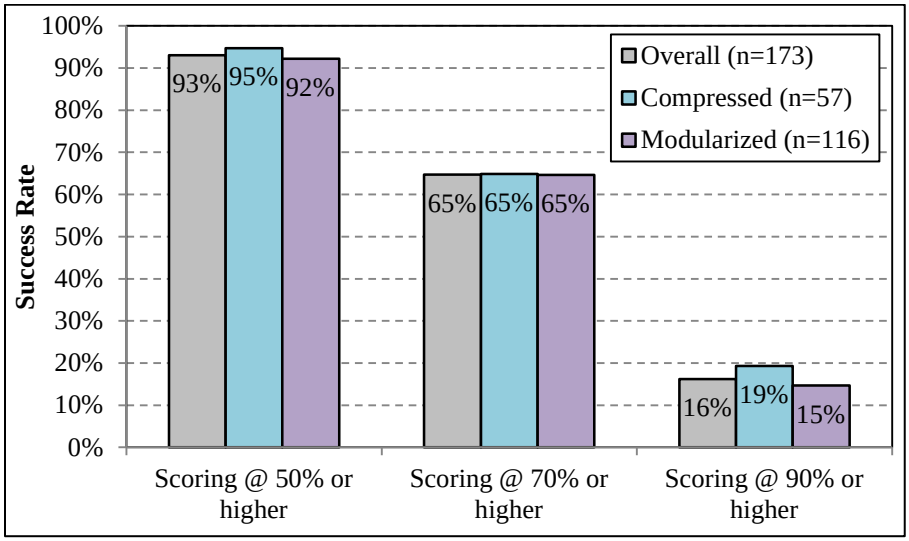

Figure 3. Comparison of MAT 0057 final exam success rates at scores of 50% or higher, 70% or higher, and 90% or higher.

Of the 173 artifacts from the final exam, 18 originated from the Charlotte Campus, 44 from the Collier Campus, 0 from the Hendry-Glades Center, and 111 from the Thomas Edison (Lee) Campus. A comparison of mean scores by campus is shown in Figure 4. Results of the ANOVA exhibit no statistically significant difference between sites [$F(2, 172) = 0.71$, $p=0.495$]. 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.

A longitudinal study exhibits a general positive trend in overall success rates from 55.7% in Fall 2014 to 64.7% in spring 2016 (Figure 5). Any trends by learning strategy, if existing, are less clear. There is also no consistent pattern to success by learning strategy either, as both compressed and modularized strategies exhibit the higher of the two in two of the four terms (Spring 2015 and Summer 2015 for compressed, and the remaining for modularized), while spring 2016 are nearly identical.

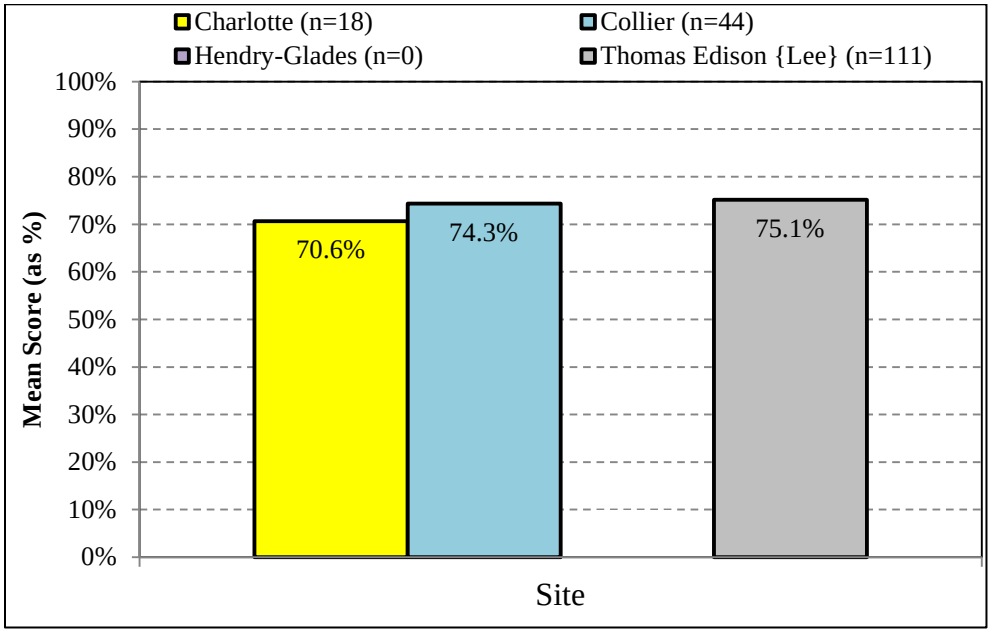

Figure 4. Comparison of MAT 0057 Final exam (mastery exam) scores for Charlotte (yellow), Collier (teal), Hendry-Glades (purple), and Thomas Edison {Lee} (gray) campuses for spring 2016.

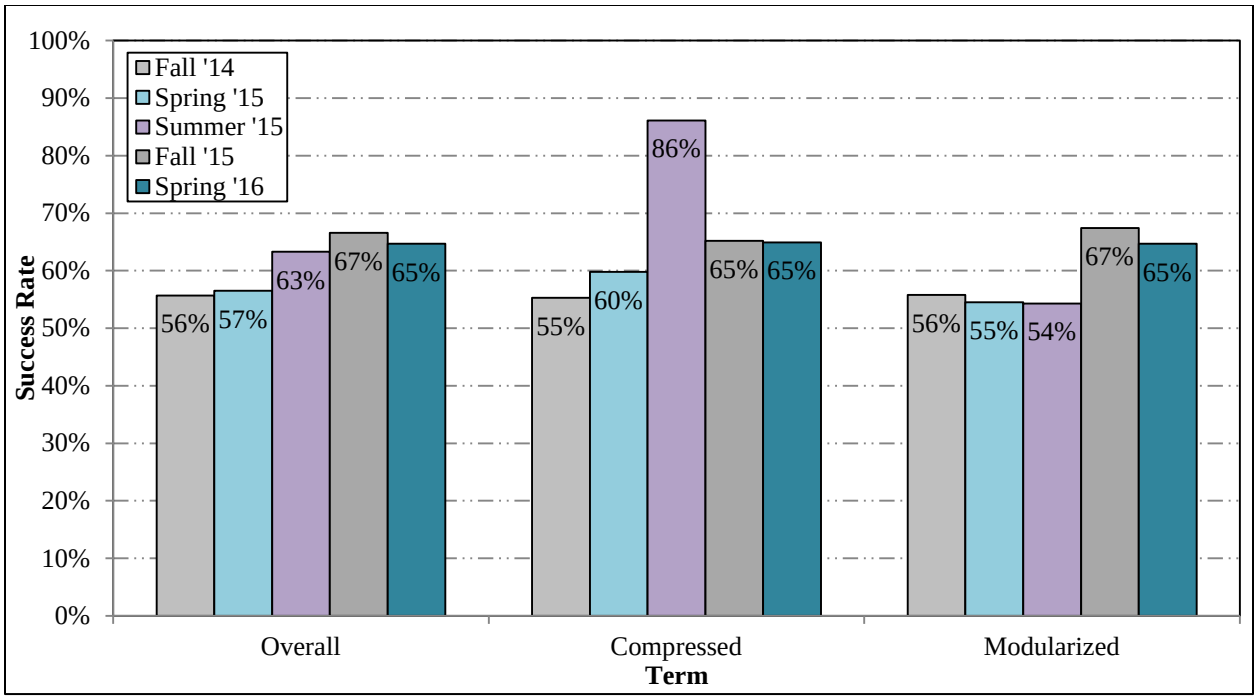

Figure 5. Comparison of MAT 0057 final exam success rates over time. Success rate is achievement at 70% or higher.

[1]Davis, J.C. 1973. Statistics and Data Analysis in Geology. John Wiley & Sons, New York, New York, 564 pp.
[2]McDonald, J.H. 2009. Handbook of Biological Statistics (2nd ed.). Sparky House Publishing, Baltimore, Maryland.
[3]Siegel, S. 1956. Nonparametric statistics for the behavior sciences. McGraw-Hill, New York, New York, 312 pp.
[4]Wilkinson, 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 0058 Final Exam Assessment Report – Spring 2016

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* and MAT 0058 *Mathematics for College Success Module Completion*, which was added for the first time this semester (spring 2016). The following report details the results for the final exam for MAT 0058 for the spring 2016 term.

During spring 2016, 9 course sections were offered. Of those, 8 sections submitted results. In the 8 reporting sections, 55 artifacts from the final exam were collected with, as a consequence of the design of the course (a module completion course) all 55 originating from the modularized learning strategy version of the course. A distribution of the artifact scores can be found in Figure 1. The data exhibit a bimodal distribution with peaks centered on 26/45 (58%) and 33/45 (73%), down from the bimodality of MAT 0057 during spring 2016, where peaks were centered on 35/45 (78%) and 39/45 (87%).

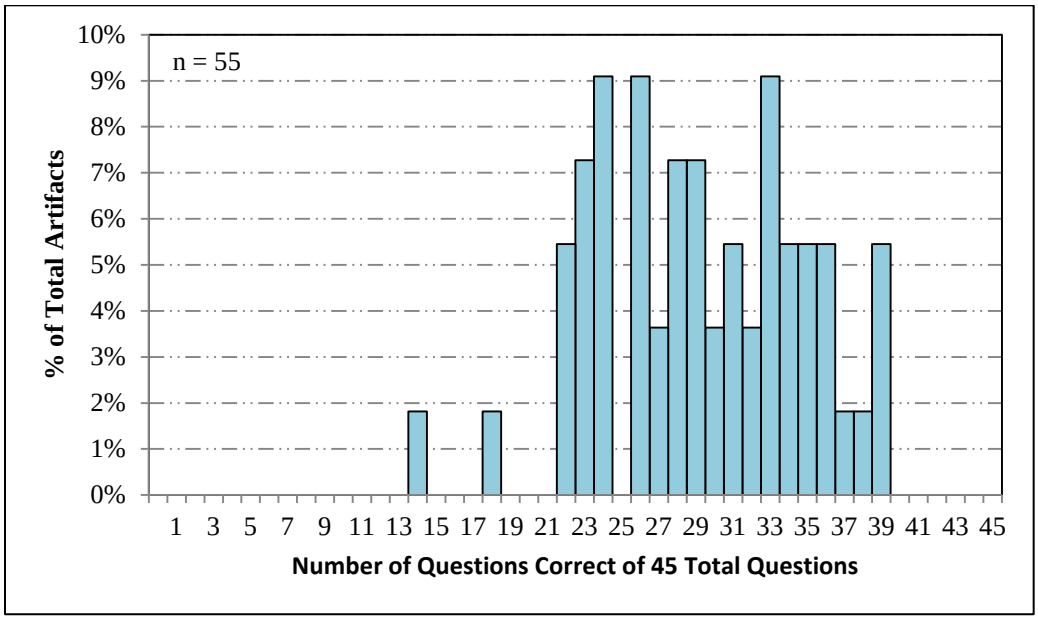

Figure 1. MAT 0058 final exam score distribution for spring 2016.

Success rates based on achievement at the 50%, 70%, and 90% level were compiled (Figure 2). The percentage of artifacts scored 50% or better on the final exam is 91%, down from 93% in MAT 0057. The percentage of artifacts scored 70% or better on the final exam is 38%, down from 65% in MAT 0057. The percentage of artifacts scored 90% or better on the final exam is 0%, down from 16% in MAT 0057.

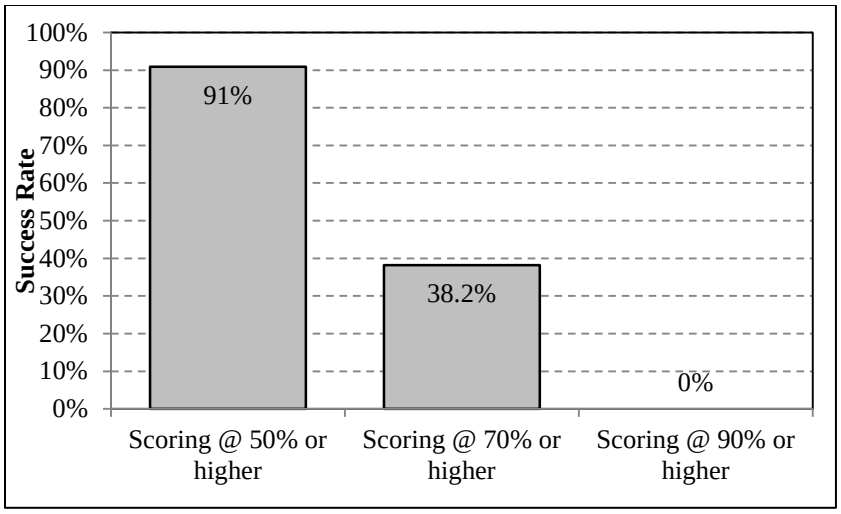

Figure 2. Comparison of MAT 0058 final exam success rates at scores of 50% or higher, 70% or higher, and 90% or higher.

Of the 55 artifacts from the final exam, 5 originated from the Charlotte Campus, 16 from the Collier Campus, 0 from the Hendry-Glades Center, and 29 from the Thomas Edison (Lee) Campus. A comparison of mean scores by campus is shown in Figure 4. Results of the ANOVA may be misleading due to low sample size for the Charlotte campus (n=5). In place of this, a Welch's t-test according to standard methods[1,2,3,4] was completed for Collier and Thomas Edison only and exhibits no statistically significant difference between sites ($t(43)=0.443$, $p=0.660$). 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.

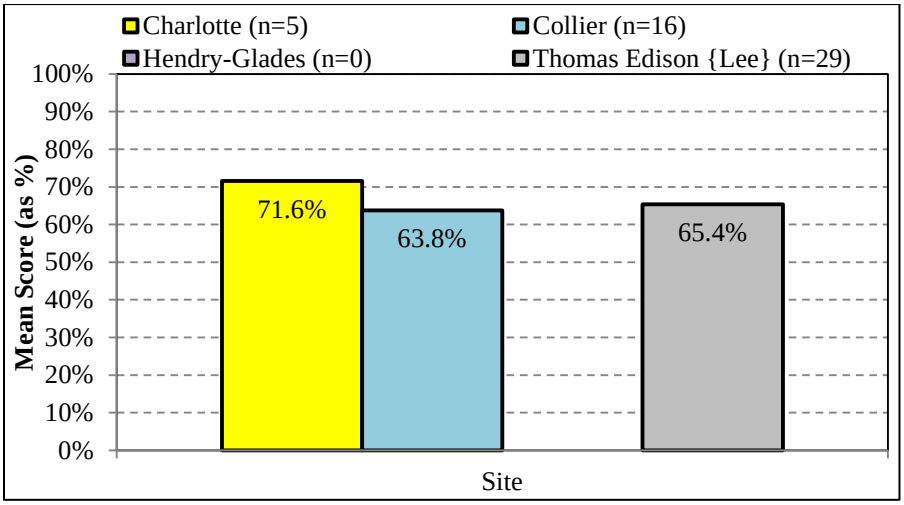

Figure 3. Comparison of MAT 0058 Final exam (mastery exam) scores for Charlotte (yellow), Collier (teal), Hendry-Glades (purple), and Thomas Edison {Lee} (gray) campuses for spring 2016.

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

Section 6

MAT 0057 & 0058 Survey Report – Spring 2016

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 spring 2016 term.

Of the 613 combined enrollments of MAT 0057 and MAT 0058 during spring 2016, 91 responded to the survey (80 from MAT 0057, 11 from MAT 0058) for a response rate of 15.0%, down from 16% from the fall. Of the 91 respondents, 47% were enrolled in the traditional classroom, or compressed, learning strategy while 53% were enrolled in the computer assisted, or modularized learning strategy.

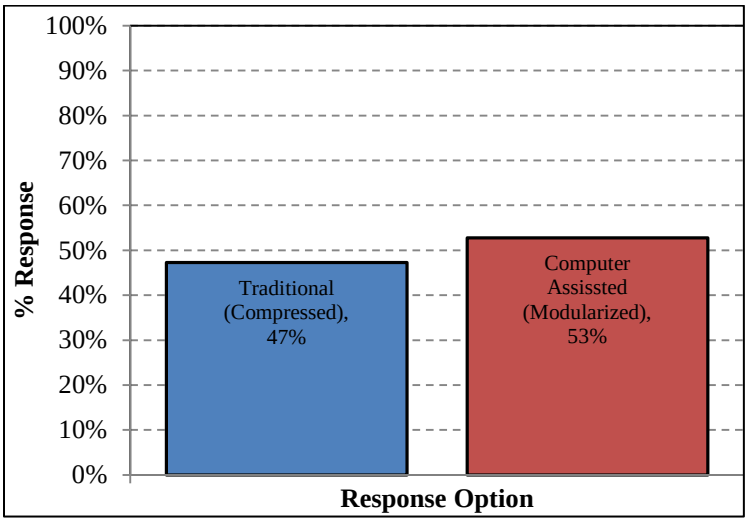

Figure 1. Response rate by learning strategy.

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*

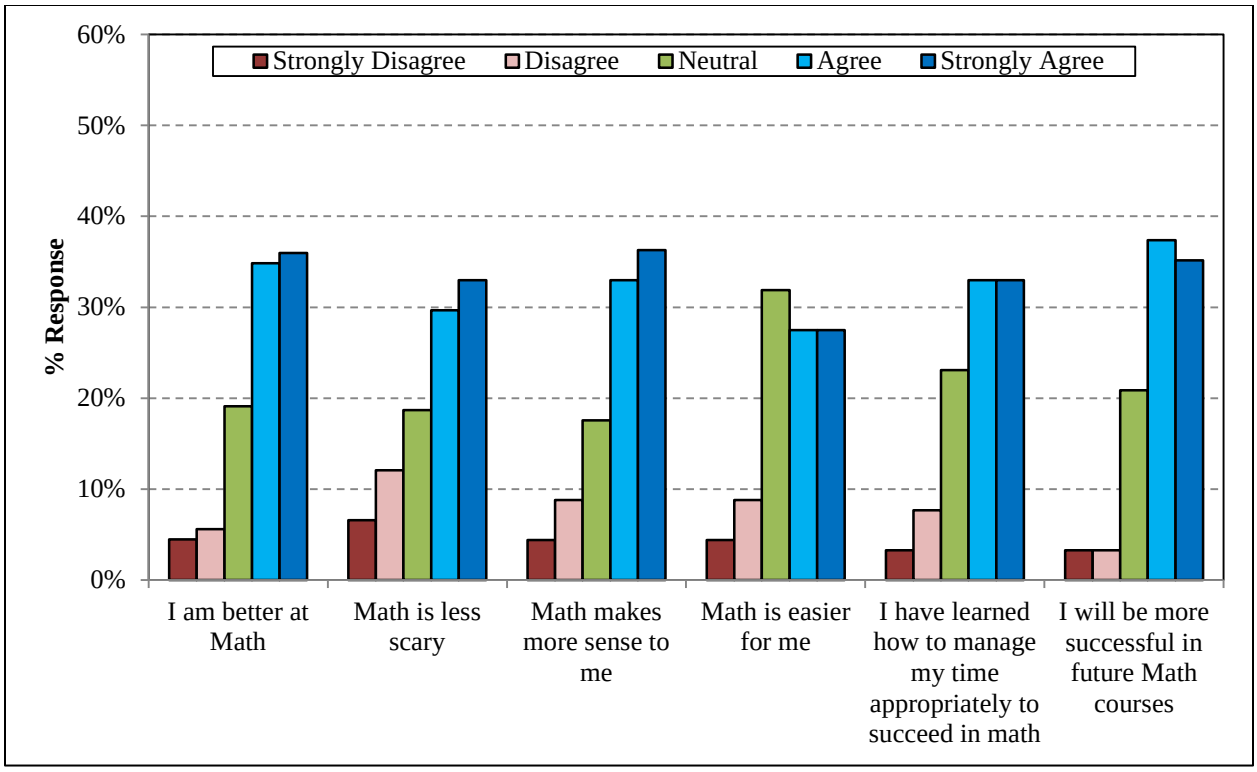

Figure 2. Responses to Question #8 " I believe I have improved in the following areas since taking this Math class."

All six areas exhibit positive responses (Agree or Strongly agree) of 50% or better. Q8-1 and Q8-6 exhibit positive response rates greater than 70%. Question 8-2 exhibits the highest negative response rates (Disagree or Strongly disagree) with 19%.

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*

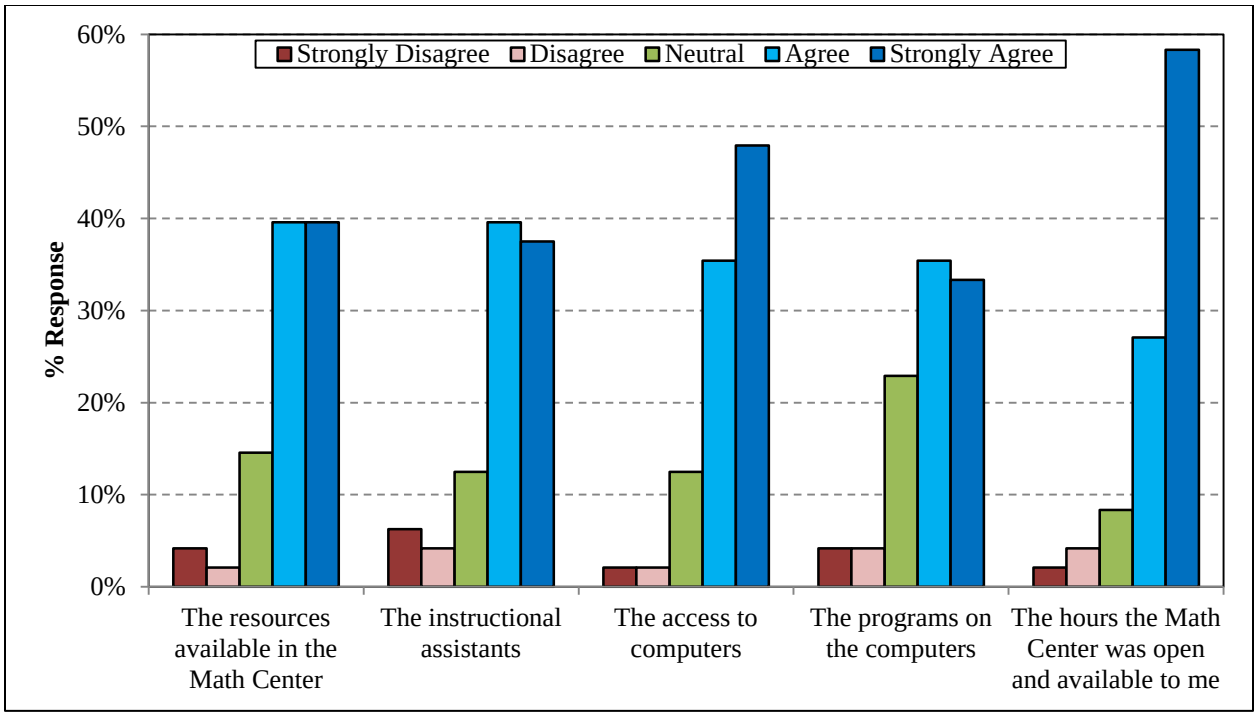

Figure 3. Responses to Question #10 "I benefited from the following aspects of the Math Academic Support Center this semester."

All five areas exhibit positive responses (Agree or Strongly agree) of 65% or better. Q10-3 and Q10-5 exhibit positive response rates greater than 80%. No question exhibits negative response rates (Disagree or Strongly disagree) higher than 8%.

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*

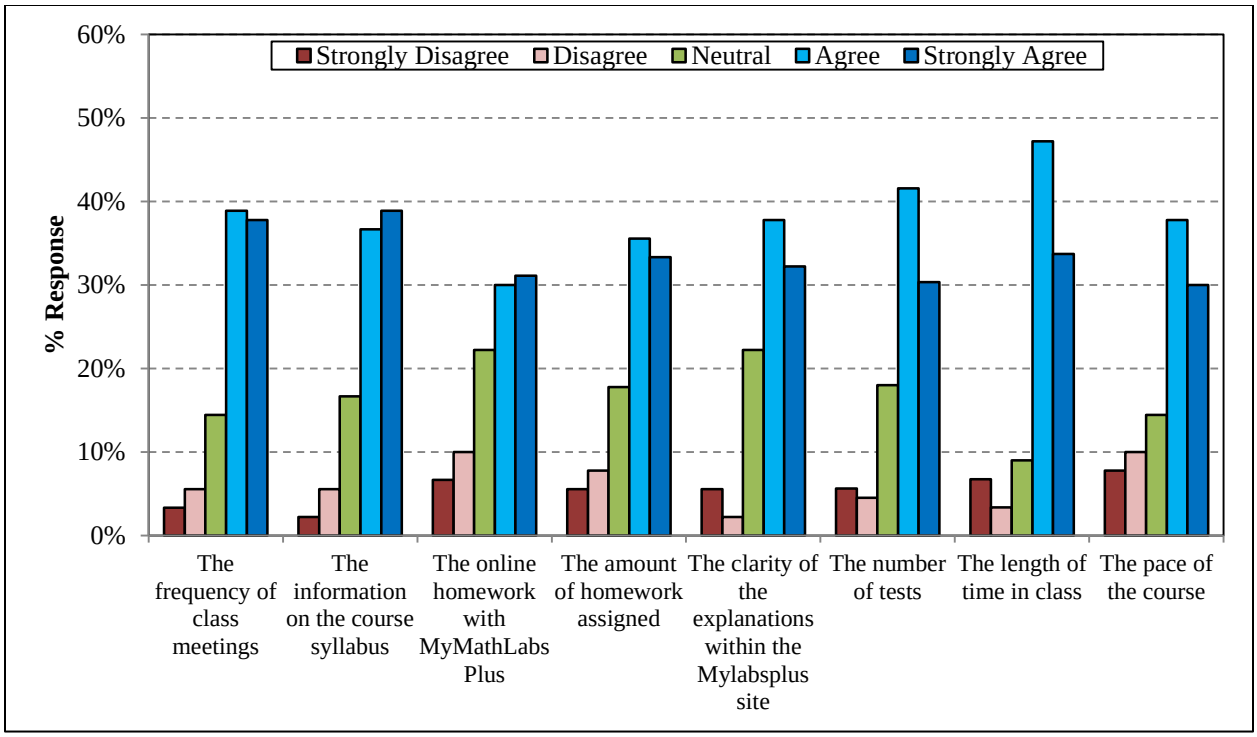

Figure 4. Responses to Question #11 "I was satisfied with the following aspects of my Math class this semester."

All eight areas exhibit positive responses (Agree or Strongly agree) of 60% or better. Q11-1, 11-2, and 11-7 exhibit positive response rates greater than 70%. Question 11-8 exhibits the highest negative response rate (Disagree or Strongly disagree) with 18%.

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*

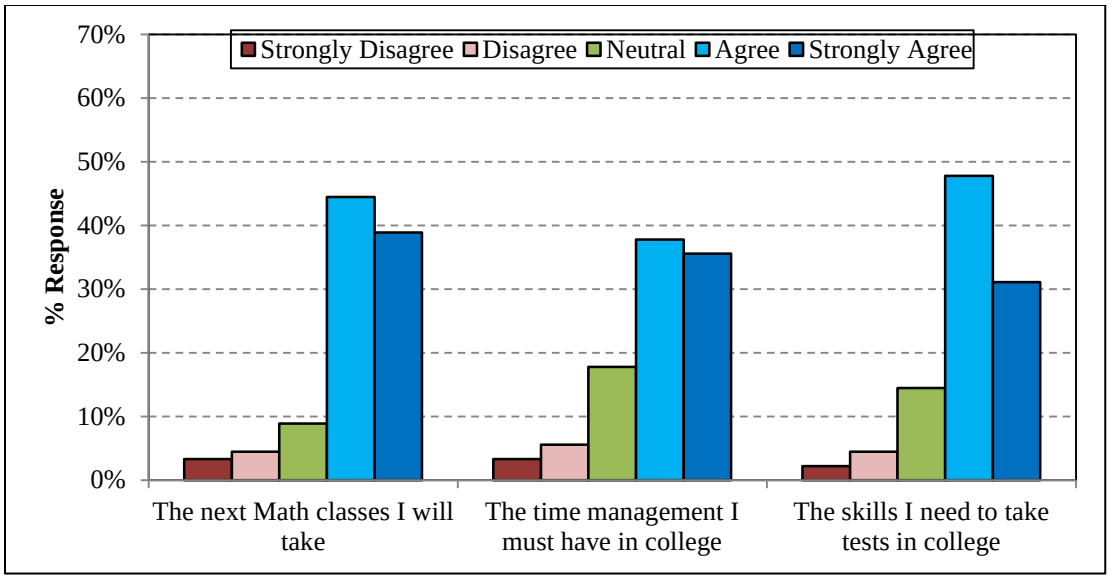

Figure 5. Responses to Question #12 "This Math course prepared me for:"

All three areas exhibit positive responses (Agree or Strongly agree) of 70% or better. Q12-3 exhibits the highest positive response rate greater than 79%. Question 12-2 exhibits the highest negative response rate (Disagree or Strongly disagree) with 9%.

A tabulation of positive responses (Strongly agree or Agree) is included below based on learning strategy (Table 1). Of the 22 questions, 15 of 22 exhibit a more positive response from modularized respondents and 1/22 were statistically significant based on results of a Fisher's exact test.

	Traditional (Compressed)	Computer-based (Modularized)
Q8-1	79%	64%
Q8-2	74%	52%
Q8-3	72%	67%
Q8-4	56%	54%
Q8-5	60%	71%
Q8-6	74%	71%
Q10-1	67%	89%
Q10-2	67%	85%
Q10-3	71%	93%
Q10-4	48%	85%*
Q10-5	76%	93%
Q11-1	79%	83%
Q11-2	72%	81%
Q11-3	72%	79%
Q11-4	58%	64%
Q11-5	67%	70%
Q11-6	67%	72%
Q11-7	74%	70%
Q11-8	65%	70%
Q12-1	84%	83%
Q12-2	65%	81%
Q12-3	74%	83%

Table 1. Positive survey response (Strongly Agree or Agree) by learning strategy. Shaded cells denote higher of the two learning strategies. *denotes statistical significance.

Table 2 shows positive response rates (Agree or Strongly agree) for each of the survey prompts over time beginning fall 2014 through spring 2016. Note that comparison from fall-to-spring is less useful as assessment reports across multiple course level and program level assessments at FSW typically exhibit substantial differences from fall to spring term and are better interpreted from fall-to-fall and spring-to-spring (see http://www.fsw.edu/facultystaff/assessment/history for further details). Of the 26 questions, 10 exhibit increases while 13 exhibit declines.

	Fall 2014 n=265	Spring 2015 n=137	Summer 2015 n=73	Fall 2015 n=120	Spring 2016 n=91
Question 8 – Prompt: I believe I have improved in the following areas since taking this Math class.					
I am better at Math	62%	74%	81%	69%	**71%**
Math is less scary	54%	59%	69%	63%	**63%**
Math makes more sense to me	63%	65%	78%	65%	**69%**
Math is easier for me	52%	53%	69%	52%	**55%**
I have learned how to manage my time appropriately to succeed in math	63%	65%	74%	69%	**66%**
I will be more successful in future Math courses	70%	71%	84%	77%	**73%**
Question 10 – Prompt: I benefited from the following aspects of the Math Academic Support Center this semester.					
The resources available in the Math Center	59%	80%	83%	76%	**79%**
The instructional assistants	57%	73%	83%	75%	**77%**
The access to computers	72%	86%	77%	81%	**83%**
The programs on the computers	68%	76%	77%	71%	**69%**
The hours the Math Center was open and available to me	68%	84%	90%	79%	**85%**
Question 9 – Prompt: I was satisfied with the following aspects of my Math class this semester.					
The frequency of class meetings	72%	85%	86%	81%	**77%**
The information on the course syllabus	78%	84%	89%	80%	**76%**
The online homework with MyMathLabs Plus	77%	84%	81%	74%	**61%**
The amount of homework assigned	69%	69%	67%	70%	69%
The clarity of the explanations within the MyLabsPlus site	51%	73%	70%	61%	**70%**
The number of tests	77%	78%	85%	73%	**72%**
The length of time in class	76%	84%	79%	79%	**81%**
The pace of the course	64%	67%	69%	67%	**68%**
Question 10 – Prompt: This Math course prepared me for:					
The next Math classes I will take	71%	75%	85%	68%	**83%**
The time management I must have in college	71%	71%	81%	69%	**73%**
The skills I need to take tests in college	70%	68%	82%	68%	**79%**

Table 2. Positive (Agree or Strongly agree) response rates over time. Increases from spring-to-spring noted in green text, declines in red.

Section 7

REA 0019 Mastery Exam Assessment Report – Spring 2016

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 as an assessment within REA 0019 *Reading for College Success*. The following report details the results for Townsend Press College Reading Test for the spring 2016 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 do not indicate a statistically significant improvement from 25.5 to 28.0 ($t(136)=0.89$, $p=0.090$). Therefore we cannot reject the null hypothesis that the difference in the means of the overall scores of the pre- and post-test scores is equal to 0, and we cannot conclude this with a 95% confidence that the differences in scores are not solely due to chance. A distribution of overall scores from pre-to-post test can be found in figure 2. By comparison, spring 2015 change was 26.0 to 28.9 (+2.9).

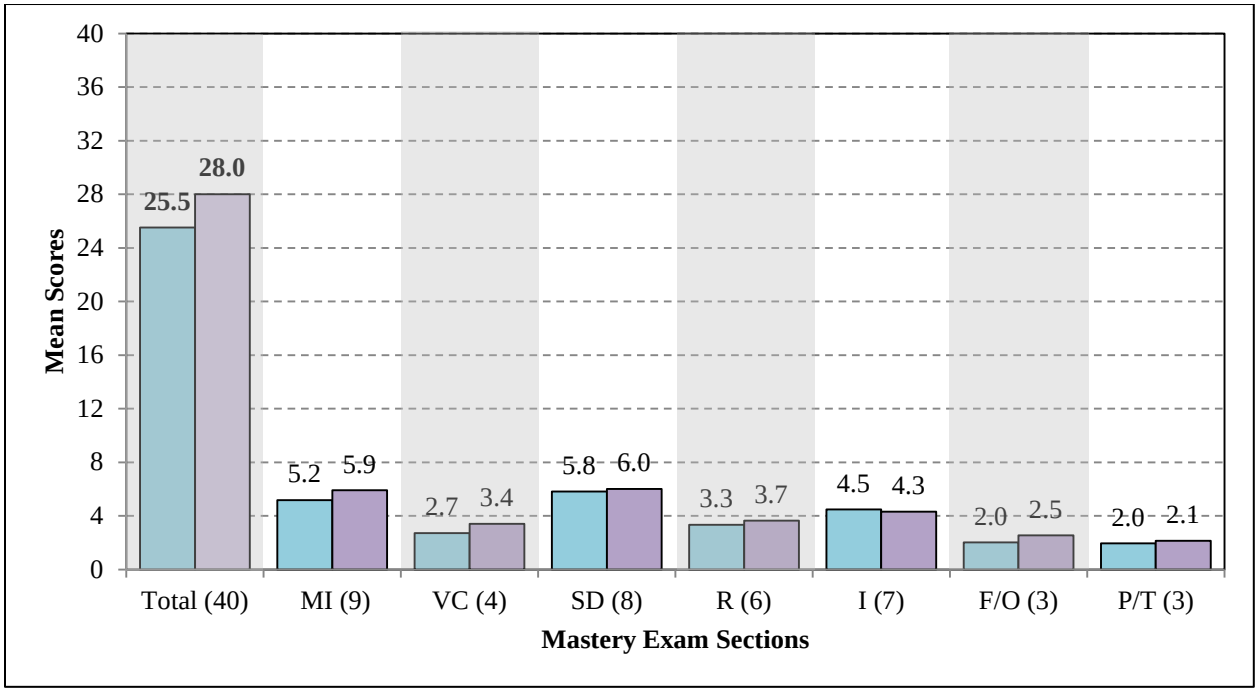

Figure 1. Comparison of pre- (teal) and post-test (purple) achievement for the Townsend Press College Reading Test (serving as the course mastery exam) conducted during the spring 2016 semester in REA 0019 courses. MI: Main Idea (9 points), VC: Vocabulary (4 points), SD: Supporting Details (8 points), 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.

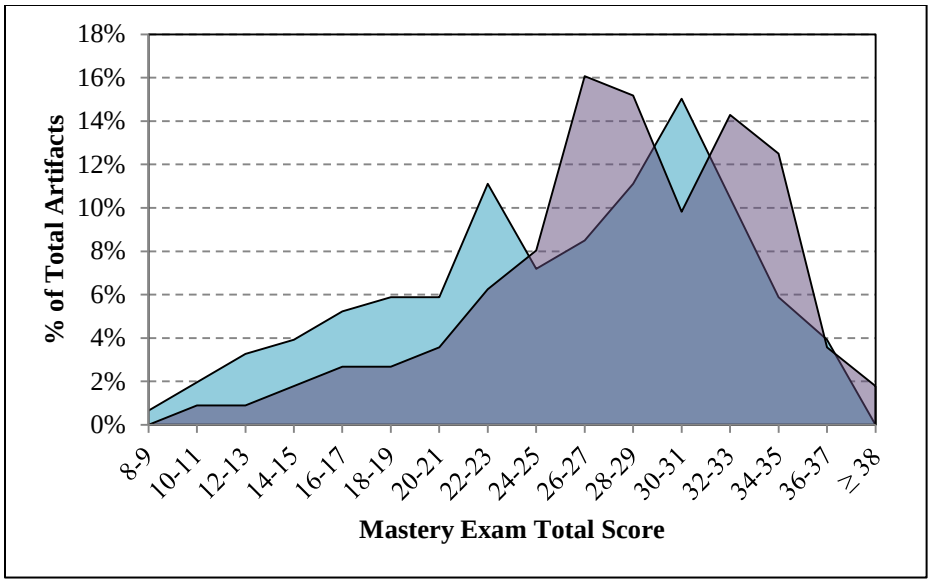

Figure 2. Distribution of pre- (teal) and post-test (purple) scores for the Townsend Press College Reading Test (serving as the course mastery exam) conducted during the spring 2016 semester in REA 0019 courses.

A comparison of pre-test to post-test results as a function of learning strategy (modularized, compressed, and contextualized) is shown in Figure 3. The mean scores of all learning strategies increased from pre-to-post tests ranging from +2.6/40 points in modularized sections to +4.9/40 points in compressed sections. These improvements amount to a range of 7 to 12 percentage points. Each comparison study 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 for all learning strategies, although in both modularized and compressed strategies, results are marginally significant (Johnson, 2013). Based on the work of Johnson, there is a 17-25% chance that the marginally significant result may be false positives (i.e. Type I errors).

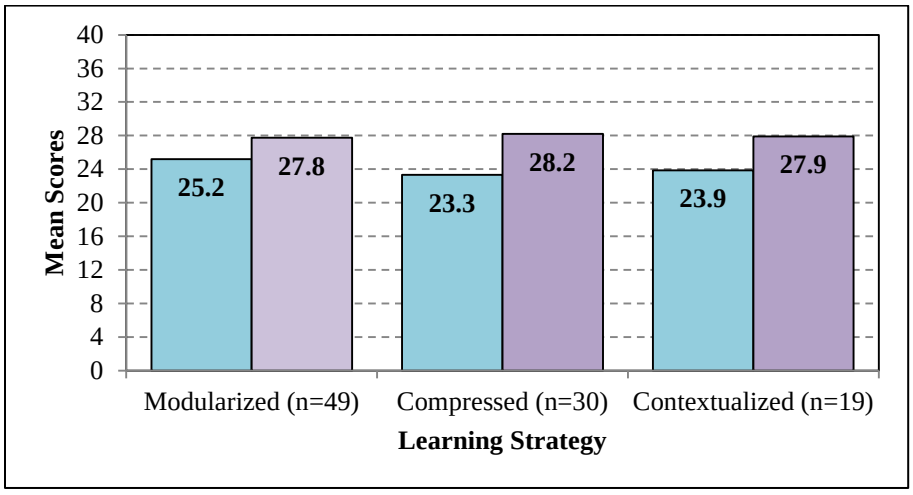

Figure 3. Comparison of pre- (teal) and post-test (purple) achievement for the Townsend Press College Reading Test (serving as the course mastery exam) conducted during the spring 2016 semester in REA 0019 courses based on enrollment in a modularized (computer-based) course or a traditional (compressed) course.

A comparison of exam success rates for pre-test and post-test according to learning strategy exhibits substantial improvement across all strategies. Based on results of a Fisher's Exact Test for independence, no learning strategies or the overall (all scores students regardless of strategy) have statistically significantly higher rates of passing scores in the post-test than in the pre-test. Results of the Fisher's Exact Test for each as well as success rates are shown in Table 1.

A longitudinal study of success rates on this assessment is provided in Table 2. Note that overall success rates are down compared with spring 2015, however a vastly different representation of learning strategies are represented in spring 2016 as compared with the previous year. For example, a full 20% of courses offered in spring 2016 were contextualized while no sections of contextualized existed in the previous year. The relationship between the overall decline and the impact from this learning strategy is unclear at this point except to say that the modularized exam success rate is up from the previous year.

	Modularized	Compressed	Contextualized	Overall
Pre-Test	53.2%	36.4%	41.2%	**46.1%**
Post-Test	59.2%	53.7%	57.1%	**57.1%**
P	*0.582*	*0.129*	*0.279*	***0.083***

Table 1. Pre-test/Post-test success rates (achievement at 70% or higher) by learning strategy for spring 2016.

	Modularized	Compressed	Contextualized	Overall
Spring 2015	56.7%	79.2%	*	**72.9%**
Summer 2015	66.7%	*	*	**66.7%**
Fall 2015	71.6%	65.6%	64.5%	**68.8%**
Spring 2016	59.2%	53.7%	57.1%	**57.1%**

Table 2. Longitudinal study of post-test success rates (achievement at 70% or higher) using the present assessment (Townshend Press College Reading Test). *Denotes no sections of the strategy offered.

A paired comparison was also completed to gauge improvement in a case-by-case basis. In that study, 69% of students exhibit at least some improvement from pre-to-post test (Figure 4). Of those, 43% of students exhibit improvement of greater than or equal to 10% (4 point or more increase on the 40-point test). This is a 3% improvement over fall 2015 at 40%.

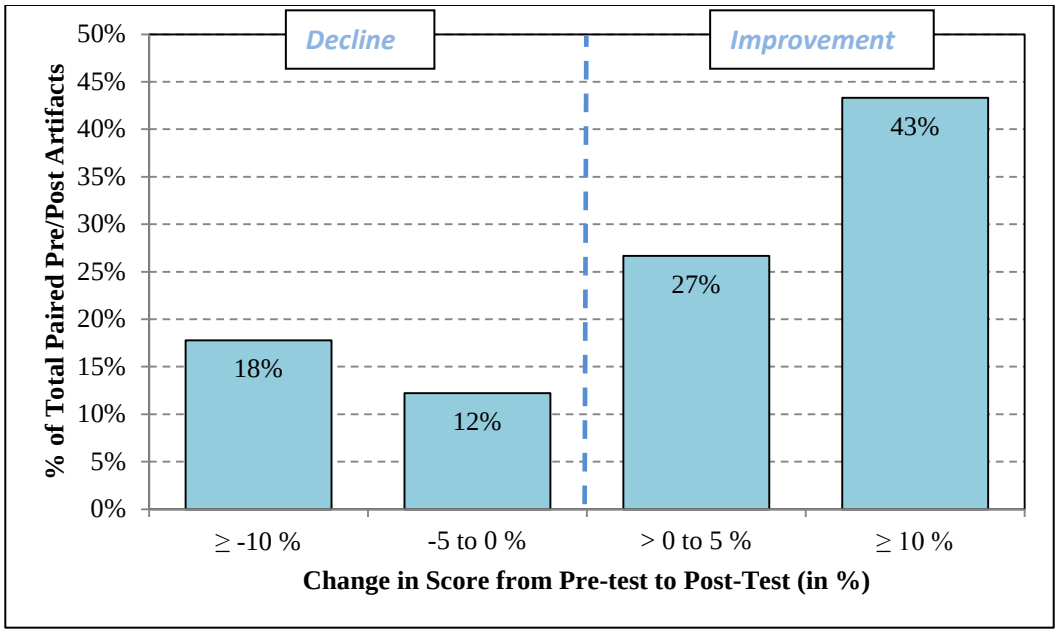

Figure 4. Comparison of the change in individual students' paired tests from pre-test to their post-test counterpart for spring 2016.

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

Section 8

REA 0019 Survey Report – Spring 2016

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 spring 2016 term.

Of the 152 students enrolled in REA 0019 during spring 2016, 15 responded to the survey for a response rate of 10%. 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 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*

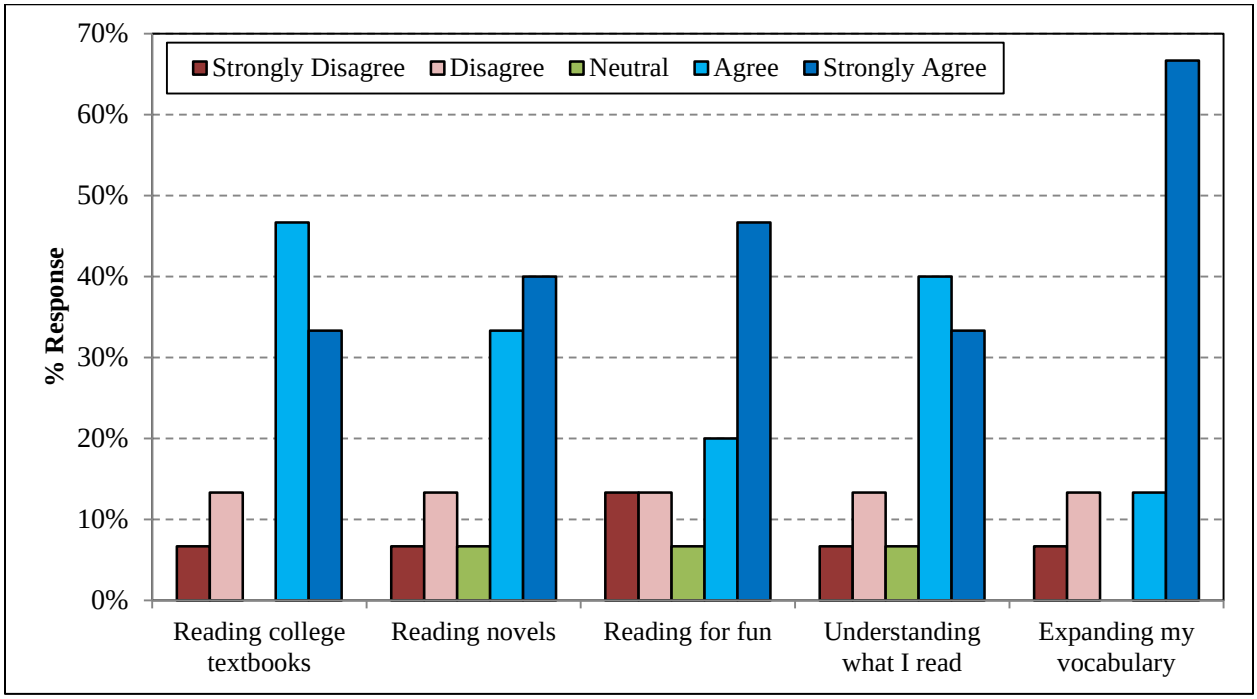

Figure 1. Responses to Question #7 "I believe I have improved in the following areas since taking this reading class."

All five areas exhibit positive responses (Agree or Strongly agree) of 75% or better with the exception of Q7-2 (73%). Q7-1 and Q7-5 exhibit positive response rates greater than 80%. Question 7-2 is the only question to exhibit negative responses (Disagree or Strongly disagree) greater than 20%. A review of

positive responses by learning strategy for Question 7, a focal element in the study, is shown in Figure 2. Note that only six responses were recorded originating from a modularized section and seven from compressed so interpretation may be limited. Moreover, just one respondent reported from the contextualized course sections and so the data is not reported here as it would only be a series of 0% or 100% and not valuable.

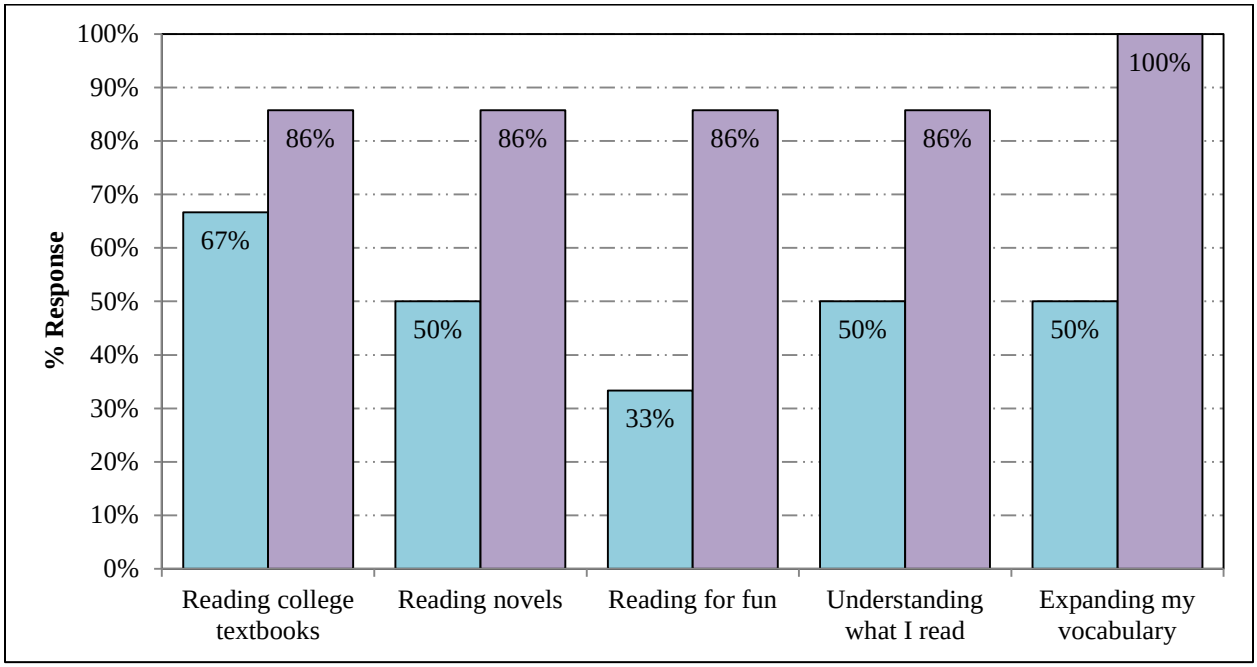

Figure 2. Responses to Question #7 for Modularized (teal) where n=6 and Compressed (purple) where n=7. Contextualized is not shown due to very low sample size (n=1).

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

> *#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*

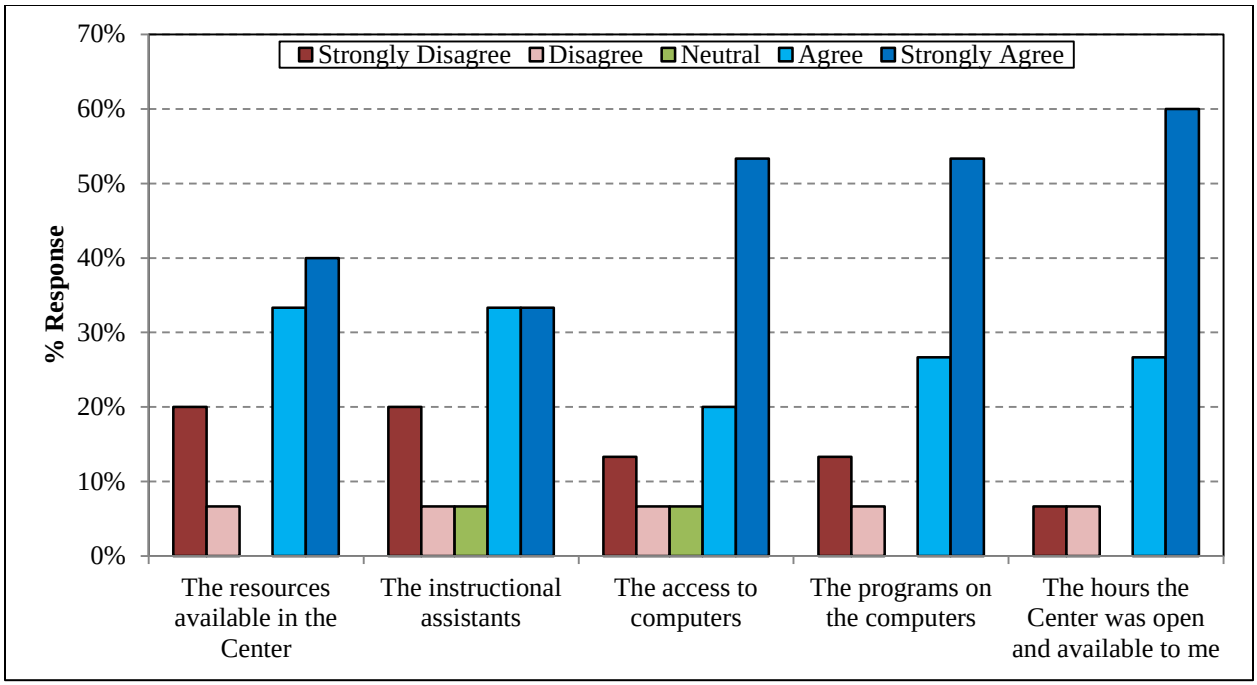

Figure 3. Responses to Question #8 "I benefited from the following aspects of the Academic Support Center for Reading this semester."

All five areas exhibit positive responses (Agree or Strongly agree) of 70% or better. Q8-5 exhibits a positive response rate of nearly 90%. Questions exhibit negative responses (Disagree or Strongly disagree) ranging from 14% to 27%.

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

#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*

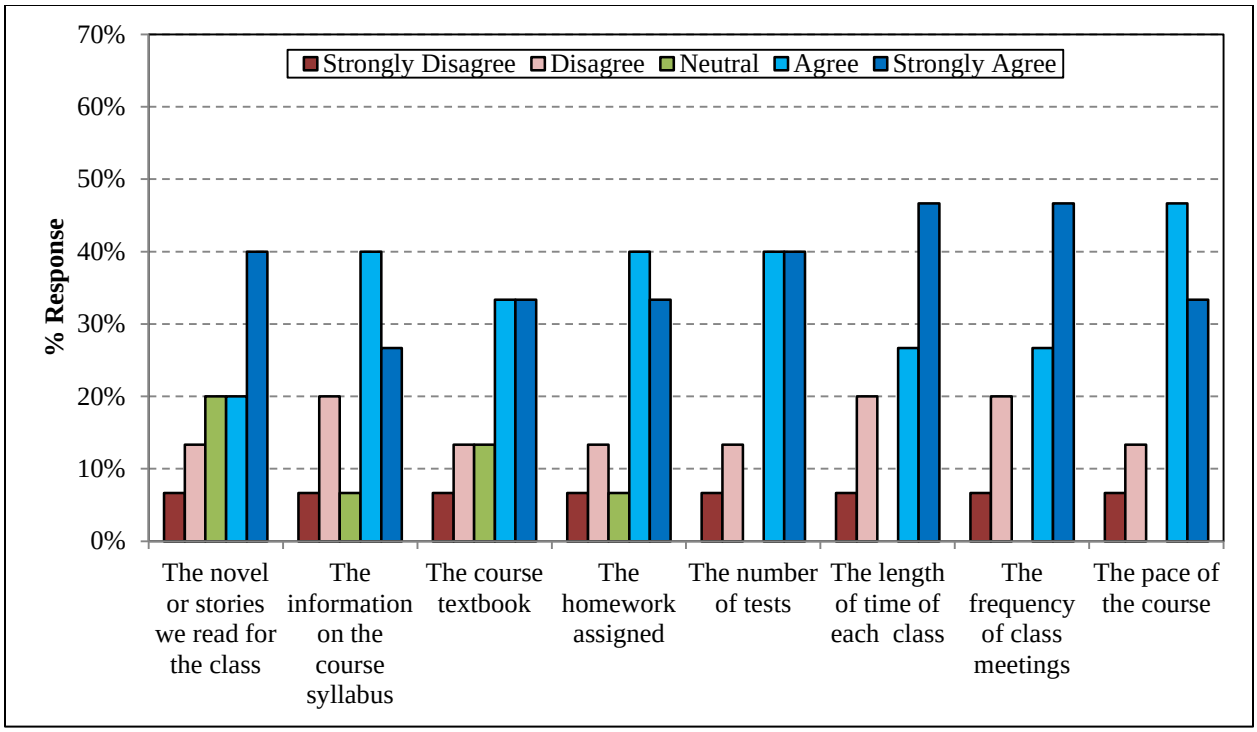

Figure 4. Responses to Question #9 " I was satisfied with the following aspects of my Reading class this semester."

All eight areas exhibit positive responses (Agree or Strongly agree) of 60% or better. Question 9-8 exhibits a response of Strongly Agree at greater than 80%. Questions exhibit negative responses (Disagree or Strongly disagree) ranging from 20% to 27%.

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

#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*

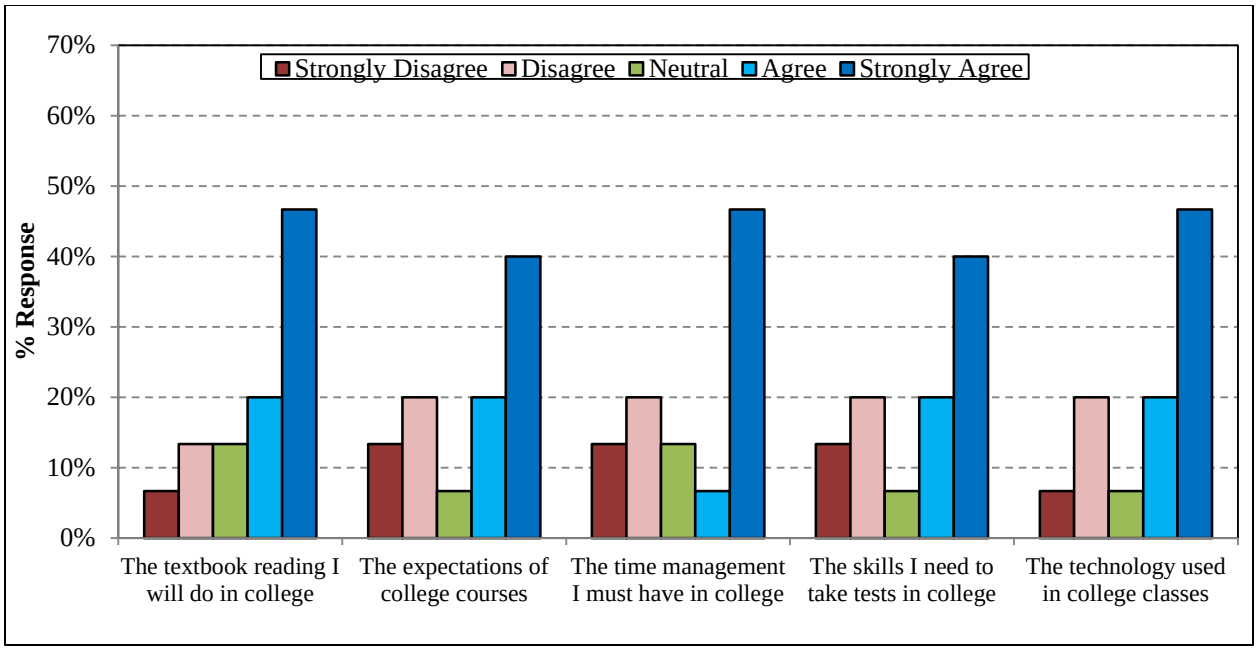

Figure 5. Responses to Question #10 "This Reading course prepared me for:"

All five areas exhibit positive responses (Agree or Strongly agree) of 60% or better. Questions exhibit negative responses (Disagree or Strongly disagree) ranging from 20% to 33%. A review of positive responses by learning strategy for Question 10, a focal element in the study, is shown in Figure 6. Note that only six responses were recorded originating from a modularized section and seven from compressed so interpretation may be limited. Moreover, just one respondent reported from the contextualized course sections and so the data is not reported here as it would only be a series of 0% or 100% and not valuable.

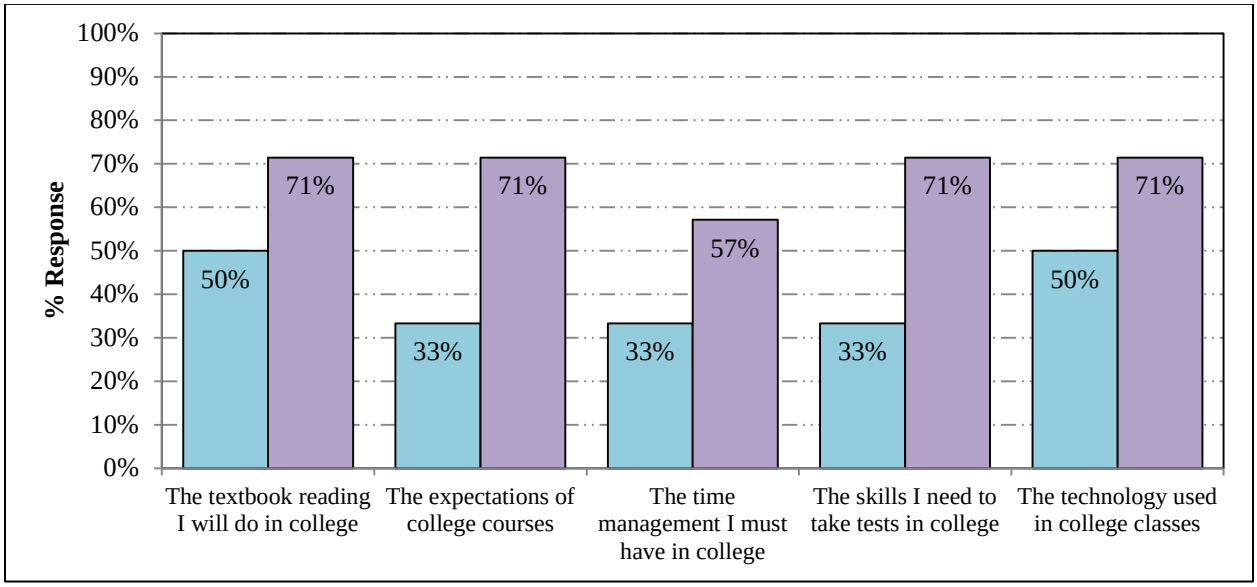

Figure 6. Responses to Question #10 for Modularized (teal) where n=6 and Compressed (purple) where n=7. Contextualized is not shown due to very low sample size (n=1).

Table 1 shows positive response rates (Agree or Strongly agree) for each of the survey prompts over time beginning fall 2014 through spring 2016. Note that comparison from fall-to-spring is less useful as assessment reports across multiple course level and program level assessments at FSW typically exhibit substantial differences from fall to spring term and are better interpreted from fall-to-fall and spring-to-spring (see http://www.fsw.edu/facultystaff/assessment/history for further details). Of the 23 questions, 21 exhibit declines while 2 exhibit increases. With small sample sizes as is the case with the spring 2016 results, changes of consequence can also be difficult to determine.

	Fall 2014 n=51	Spring 2015 n=21	Summer 2015 n=2	Fall 2015 n=40	Spring 2016 n=15
Question 7 – Prompt: I believe I have improved in the following areas since taking this Reading class.					
Reading college textbooks	58%	90%	low	85%	**80%**
Reading novels	60%	75%	sample	60%	**73%**
Reading for fun	58%	90%	size	65%	**67%**
Understanding what I read	67%	90%		85%	**73%**
Expanding my vocabulary	69%	86%		90%	**80%**
Question 8 – Prompt: I benefited from the following aspects of the Academic Support Center for Reading this semester.					
The resources available in the Center	69%	75%	low	67%	**73%**
The instructional assistants	65%	85%	sample	68%	**67%**
The access to computers	69%	86%	size	74%	**73%**
The programs on the computers	63%	76%		82%	**80%**
The hours the Center was open and available to me	71%	85%		77%	**87%**
Question 9 – Prompt: I was satisfied with the following aspects of my Reading class this semester.					
The novel or stories we read for the class	67%	86%	low	63%	**60%**
The information on the course syllabus	71%	95%	sample	80%	**67%**
The course textbook	63%	90%	size	78%	**67%**
The homework assigned	71%	86%		78%	**73%**
The number of tests	63%	90%		70%	**80%**
The length of time of each class	75%	86%		78%	**73%**
The frequency of class meetings	71%	90%		73%	**73%**
The pace of the course	69%	90%		78%	**80%**
Question 10 – Prompt: This reading course prepared me for:					
The textbook reading I will do in college	71%	86%	low	68%	**67%**
The expectations of college courses	73%	81%	sample	73%	**60%**
The time management I must have in college	73%	71%	size	70%	**53%**
The skills I need to take tests in college	71%	81%		68%	**60%**
The technology used in college classes	65%	81%		63%	**67%**

Table 1. Positive (Agree or Strongly agree) response rates over time. Increases from spring-to-spring noted in green text, declines in red.