Summary of the Pre/Posttest and Diagnostic Assessments

from

Spring 2014 through Summer 2014

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Introduction

This report summarizes the results of the extensive COMPASS testing that occurred in Spring 2014 and Summer 2014 as a result of the LEQSF(2013-14)-ENH-PEN-06 grant obtained by Dr. Paul Fowler. The grant resulted in the opening of an Assessment Center and Modular Mathematics Laboratory (M-203) and Modular Mathematics Classroom (M-204). During spring 2014, 2,640 student visits were logged in the M-203 lab and seven classes met in M-204.

According to the grant language, one of the objectives was to pre- and posttest at least 100 students in ENGL 0001 (developmental writing), MATH 0001 (developmental mathematics), MATH 0002 (developmental mathematics), and UNIV 1005 (developmental reading) using ACT's COMPASS. Pretests were given to students in the developmental courses immediately after registration closed for the spring 2014 from January 17 through Friday January 24, 2014. Posttest were given to the same sections of each developmental course at the end of the semester from April 23 through May 1, 2014. In each case, students were given the directions for the test to minimize procedural errors. Only students who had a pretest and posttest score were included in the paired t-test at the conclusion of the study. Unfortunately, the resulting pairs of scores used for the paired t-test was less than 100. However, in each case, the number of pairs of scores was larger than the 30 observations needed for a sample to approach a normal distribution according to the Central Limit Theorem (see Hinkle, Wiersma, & Jurs, 1998; Minium, King, & Bear, 1993).

A second objective was to diagnostically test students enrolled in ENGL 0001 (writing), MATH 0001 (mathematics), MATH 0002 (mathematics), and UNIV 1005 (reading) using ACT's COMPASS Diagnostics. Descriptive statistics were then calculated for each group of assessment results. The assessments were conducted during both spring 2014 and summer 2014 immediately after registration closed. In each case, students were given the directions for the test to minimize procedural errors. In each course, the number in the sample exceeded the 30 observations needed for a sample to approach a normal distribution according to the Central Limit Theorem (see Hinkle, Wiersma, & Jurs, 1998; Minium, King, & Bear, 1993).

It is important to note that students were assessed in random course sections and no attempt was made to separate the results of first-time freshmen from continuing freshmen. As a result, the data was indicative of the environment as it is in any given semester.

English Assessment Using COMPASS from Spring 2014 to Summer 2014

<u>Pre- and Posttesting Developmental English Composition (ENGL 0001)</u>

A total of 62 students in four sections of ENGL 0001 took the writing pretest at the beginning of spring 2014; however, only 34 of the students took the posttest. As a result, only 34 students with both pretest and posttest scores were included in the paired t-test used to determine if the results of the posttests were statistically significant compared to the pretest (see Table 1).

The observed gain score (M = 9.59, SD = 21.05, N = 34) was significantly greater than zero (mean of the posttests - mean of the pretests), paired t(33) = 2.66, one-tail p = 0.006 < .05, providing evidence that developmental English, on average increases a student's COMPASS writing score by almost 10 points. A 95% C.I. about the difference in the mean writing score is (2.243, 16.993) (see Table 2).

Even though the writing pretest and posttest was not used for placement, 22 (65%) of the 34 students scored a 68 or above indicating that they were ready for general education English composition at the conclusion of the ENGL 0001 course in spring 2014.

Table 1
ENGL 0001 Paired t test Results
t-Test: Paired Two Sample for Means

	Pre Writing Skills Score	Post Writing Skills Score
Mean	64.79411765	74.38235294
Variance	564.1684492	434.728164
Observations	34	34
Pearson Correlation	0.561082582	
Hypothesized Mean Difference	0	
df	33	
t Stat	-2.655819336	
P(T<=t) one-tail	0.006044627	
t Critical one-tail	1.692360309	

Table 2
ENGL 0001 Difference of the Means Results

Difference	
Mean	9.588235294
Standard Error	3.610273923
Median	7.5
Mode	8
Standard Deviation	21.05133357
Sample Variance	443.1586453
Kurtosis	0.595336039
Skewness	0.884229067
Range	91
Minimum	-22
Maximum	69
Sum	326
Count	34
Confidence Level (95.0%)	7.345157525

English Diagnostics Assessment

For ENGL 0001, the COMPASS diagnostic assesses students' skills in punctuation, verb formation agreement, usage, relationships of clauses, shifts in construction, organization, spelling, and capitalization. Each score is out of 100 and may be considered as a percentage according to the ACT Compass Internet Version Reference Manual (2012). A total of 74 students took the diagnostic between spring 2014 and summer 2014 (see Table 3). If 70% is considered the lowest C by tradition, then most

students are comfortable with the material as they begin the course according to the scores generated by the 74 students.

Table 3
Diagnostic Writing Result for ENGL 0001 in Percents

Statistic	ENGL 0001 Punctuation	ENGL 0001 Verb Formation Agreement	ENGL 0001 Usage	ENGL 0001 Relationships of Clauses	ENGL 0001 Shifts in Construction	ENGL 0001 Organization	ENGL 0001 Spelling	ENGL 0001 Capitalization
mean	66.8	71.1	81.4	71.1	91.4	90.0	75.1	65.0
median	67.0	71.0	84.0	73.0	94.0	94.0	76.0	72.0
s.d.	15.1	12.2	10.1	13.8	8.7	13.0	13.9	20.7
n	74	74	74	74	74	74	74	74

Using the median since it is a more stable measure of central tendency, it appears as if students have some difficulty with punctuation, but little difficulty with other areas of writing. However, it is also worth noting that for the median scores in the low 70s that nearly one-half of the sample scored below a 70% or C grade by the very nature of the measure of central tendency and standard deviation.

Comments on Developmental English
It is worth mentioning that the results generated by this study are by no means conclusive. First time freshmen students should probably be tested over two full years in order to generate more conclusive results. For ENGL 0001, results indicated that many students placed in developmental English do not need to take the course and should instead be encouraged to take the COMPASS English Assessment prior to classes beginning in order to further reduce the number of developmental sections offered. This will be discussed with the English faculty to obtain opinions based their experience.

Update on Developmental English November 2014
At the fall 2014 faculty meeting, the English faculty confirmed that many students are indeed familiar with the course material and, as a result, do not need to take developmental English composition. New students will be encouraged to take the COMPASS writing assessment during Developmental Education Assessment Day prior to each semester beginning.

Reading Assessment Using COMPASS from Spring 2014 to Summer 2014

Pre- and Posttesting Developmental Reading (UNIV1005)
A total of 55 students in five sections of UNIV 1005 (Orientation to University Studies) took the reading pretest at the beginning of spring 2014; however, only 38 of the students took the posttest. As a result, only 38 students with both pretest and posttest scores were included in the analysis. A paired t-test was performed to determine if the results of the posttests were statistically significant compared to the pretest (see Table 4).

The observed gain score (M= 6.95, SD = 8.57, N = 38) was significantly greater than zero (mean of the posttests - mean of the pretests), paired $t(37) = 5.00$, one-tail $p = 0.000 < .05$, providing evidence that

orientation to university studies, on average, increases a student's COMPASS reading score by almost 7 points. A 95% C.I. about the difference in mean reading scores is (4.13, 9.77) (see Table 5).

Even though the reading pretest and posttest was not used for placement, 20 (53%) of the 38 students scored a 81 or above indicating that they were ready for general education reading intensive courses social science courses at the conclusion of the UNIV 1005 course in spring 2014.

Table 4
UNIV 1005 Paired t test Results

	Pre Read Score	Post Read Score
Mean	74.31578947	81.26315789
Variance	144.6002845	96.30725462
Observations	38	38
Pearson Correlation	0.709714452	
Hypothesized Mean Difference	0	
df	37	
t Stat	-4.998693678	
P(T<=t) one-tail	7.08156E-06	
t Critical one-tail	1.68709362	

Table 5
UNIV 1005 Difference in Mean Results

Difference	
Mean	6.947368421
Standard Error	1.389836799
Median	7
Mode	11
Standard Deviation	8.567529425
Sample Variance	73.40256046
Kurtosis	-0.492284529
Skewness	0.371297714
Range	36
Minimum	-9
Maximum	27
Sum	264
Count	38
Confidence Level (95.0%)	2.816076847

Reading Diagnostics Assessment

UNIV 1005 (Orientation to University Studies) was used to assess reading since approximately 1/3 of the course involves reading comprehension for first semester students. UNIV 1005 is a prerequisite for UNIV 0008 (College Reading) that is offered in the second semester. Students in the Pathways to Success program are given an opportunity to test out of the UNIV 0008 course at the conclusion of the UNIV 1005

course. In any given semester, approximately 1/3 of the students taking UNIV 1005 test out of UNIV 0008 and move on to a social science course.

A total of 54 students took the reading assessment during the spring 2014 and summer 2014 semesters (see Table 6). The COMPASS Reading Diagnostic assesses reading comprehension and vocabulary. Similar to English Composition, the results for reading suggest that 1/3 to 1/2 of the students sampled will test out of the College Reading course and will be successful at completing a social science course.

Table 6
Diagnostic Reading Results for UNIV 1005 in Percents

Statistic	UNIV 1005 Reading Comprehension	UNIV 1005 Vocabulary
mean	79.8	83.7
median	82.0	85.5
s.d.	14.5	9.9
n	54	54

Next, as mentioned above, students are given an opportunity to test out of UNIV 0008 using COMPASS. Students achieving the cut-score (81) for college-level reading as determined by ACT are permitted to opt out of UNIV 0008 and take the general education social science for their major. Table 7 details the action taken by the 318 students attempting to test out since fall 2008. 143 (45%) successfully skipped UNIV 0008 while 76 (24%) were not successful and had to take the UNIV 0008 course. No action was taken on 17% of the students since they either did not attend or have not yet taken the social science course.

Table 7
Description of Actions after a Pathways student tests out of UNIV 0008 up through spring 2014

Description of Action	n	%
Successfully completed GE after testing out of UNIV 0008	143	45.0
Did not successfully complete GE, must take UNIV 0008	76	23.9
No action taken	54	17.0
Not enrolled	26	8.2
Taken out of program due to high reading score	13	4.1
Took UNIV 0008 even though tested out	6	1.9
Grand Total	318	100.0

This data is provided as additional information that the Pathways program overall is successful at assisting students in the development of their reading skills since each of the students had to take UNIV 1005 which contains a reading component.

Updated Information on Developmental Reading November 2014
At the fall 2014 meeting, UNIV faculty asked how many of the students not successfully completing the general education course had earned a C in the course (see Table 7). The data was updated to reflect the completion of an additional 17 students in summer 2014 (see new Table 8). The number of students who did not successfully complete the general education course increased by one student to 77.

Table 8
Description of Actions after a Pathways student tests out of UNIV 0008 up through summer 2014

Description of Action	n	%
Successfully completed GE after testing out of UNIV 0008	147	44.0
Did not successfully complete GE, must take UNIV 0008	77	23.0
No action taken	60	18.0
Not enrolled	30	9.0
Taken out of program due to high reading score	15	4.5
Took UNIV 0008 even though tested out	6	1.5
Grand Total	335	100.0

An analysis on students who did not successfully complete the general education course was run in order to answer the question from the fall 2014 meeting. Students who test out must make an A or B in the general education course to be removed from UNIV 0008. As Table 9 indicates, the vast majority, 37 (48%) out of 77, received an F.

Table 9
Results for students who did not successfully complete the general education course through summer 2014.

Course Results	n	%
C	10	13.0
D	9	12.0
F	37	48.0
W	21	27.0
Total	77	100.0

In order to investigate the matter further, Table 10 was generated for all students involved through summer 2014 minus no action taken, did not enroll, or students who retested. The results, as one would probably expect, indicated that students across all scores are either successful or not at the general education course. However, one score seems to be the most problematic and that is the score of 83 (see Table 10). Only 50% of those scoring an 83 successfully completed the general education course. The scores of 81 and 82 also seem to be problematic.

Table 10
Data Matrix through summer 2014

Course Results	81	82	83	84	85	86	87	88	89	90	91	92	93	96	97	99	Total
A	1	1	8	1			15	4	17	1	3	9	2	7	1	2	72
B			20	1		3	8	2	6	1	2	8	1	6		1	59
C	1	1	7		1		3		6		3	4	2			3	31
D			2				2		2			2		1			9
F	1	2	11			1	6	1	4	1		5		3		1	37
W			8				1		6	1	2	1		1		1	21
Total	3	4	56	2	1	4	35	7	41	4	10	29	5	18	1	8	228

Comments on Developmental Reading

It is worth mentioning that the results generated by this study are by no means conclusive. First time freshmen students should probably be tested over two full years in order to generate more conclusive results. Reading scores assessed in UNIV 1005 indicate that many students can be successful taking a social science course. Allowing students to attempt to test out of the reading course has been practice at LSU Eunice for several years and will be maintained. Faculty are currently revising the handouts for UNIV 0008. Currently an A or B in the social science course must be obtained in order for the student to be successful in the UNIV 0008 course; otherwise, the student must take UNIV 0008 to further assist with reading comprehension. A discussion will take place if the grade should include the grade of C as well.

Updated Comments on Developmental Reading November 2014

Results of the tables that were added indicate that only 10 students received a C of those who were not successful at completing the general education course (see Table 9). In addition, the data indicates there is a potential problem with the scores of 81, 82, and 83 (see Table 10). This issue will be mentioned in the spring 2015 meeting for faculty input.

Mathematics Assessment Using COMPASS from Spring 2014 to Summer 2014

Pre- and Posttesting Developmental Mathematics Pre-Algebra (MATH 0001)

A total of 104 students in five sections of MATH 0001 took the algebra domain pretest at the beginning of spring 2014; however, only 63 of the students took the posttest. As a result, only 63 students with both pretest and posttest scores were included in the analysis (see Table 11). A paired t-test was performed to determine if the results of the posttests were statistically significant compared to the pretest.

The observed gain score (M = 5.03, SD = 9.88, N = 63) was significantly greater than zero (mean of the posttests - mean of the pretests), paired $t(62) = 4.04$, one-tail $p = 0.000 < .05$, providing evidence that MATH 0001, on average, increases a student's COMPASS algebra score by 5 points. A 95% C.I. about the difference in mean algebra scores is (2.54, 7.52) (see Table 12).

Even though the algebra pretest and posttest was not used for placement, 20 (32%) of the 63 students scored into MATH 0002 using the algebra domain. An additional 6 (10%) scored into general education mathematics at the conclusion of the MATH 0001 course in spring 2014.

Table 11
MATH 0001 Paired t test Results

	Pre Algebra Score	Post Alg Score
Mean	21.47619048	26.50793651
Variance	25.83410138	86.0281618
Observations	63	63
Pearson Correlation	0.150113663	
Hypothesized Mean Difference	0	
df	62	
t Stat	-4.040382428	
P(T<=t) one-tail	7.48073E-05	
t Critical one-tail	1.669804163	

Table 12
MATH 0001 Difference in Mean Results

Difference in Alg Scores	
Mean	5.031746032
Standard Error	1.245363805
Median	4
Mode	4
Standard Deviation	9.884768756
Sample Variance	97.70865335
Kurtosis	2.940334677
Skewness	1.014466012
Range	60
Minimum	-18
Maximum	42
Sum	317
Count	63
Confidence Level (95.0%)	2.489446774

Pre- and Posttesting Developmental Mathematics Introduction to Algebra (MATH 0002)

A total of 183 students in seven sections of MATH 0002 took the algebra domain pretest at the beginning of spring 2014; however, only 112 of the students took the posttest. As a result, only 112 students with both pretest and posttest scores were included in the analysis (see Table 13). A paired t-test was performed to determine if the results of the posttests were statistically significant compared to the pretest.

The observed gain score (M = 8.05, SD = 11.79, N = 112) was significantly greater than zero (mean of the posttests - mean of the pretests), paired t(111) = 7.23, one-tail p = 0.000 < .05, providing evidence that MATH 0002, on average, increases a student's COMPASS algebra score by 8 points. A 95% C.I. about the difference in mean algebra scores is (5.84, 10.26) (see Table 14).

Even though the algebra pretest and posttest was not used for placement, 30 (27%) of the 112 students scored into general education mathematics by obtaining the 40 necessary in the algebra domain at the conclusion of the MATH 0002 course in spring 2014.

Table 13
Paired t test Results for MATH 0002

	Pre Algebra Score	Post Algebra Score
Mean	25.6875	33.74107143
Variance	52.55912162	170.8062259
Observations	112	112
Pearson Correlation	0.44526595	
Hypothesized Mean Difference	0	
df	111	
t Stat	-7.2295077	
P(T<=t) one-tail	3.285E-11	
t Critical one-tail	1.658697265	

Table 14
MATH 0002 Difference in Mean Results

Difference	
Mean	8.053571429
Standard Error	1.113986147
Median	6.5
Mode	9
Standard Deviation	11.78932124
Sample Variance	138.9880952
Kurtosis	2.901744544
Skewness	0.547647994
Range	85
Minimum	-35
Maximum	50
Sum	902
Count	112
Confidence Level (95.0%)	2.207437917

Mathematics 0001 Diagnostic Assessment

For MATH 0001, 51 students were diagnostically assessed. Students were assessed using the COMPASS pre-algebra section in order to determine their level of performance with basic skills. This test assesses integers; fractions; decimals; exponents, square roots, and scientific notation; ratio and proportions, percentages, and statistics (averages) (see Table 15).

According to the results, students entering a pre-algebra class know very little about basic mathematics at the beginning of their MATH 0001 coursework. Students, on average, performed the best on decimals (52%) and integers (43%); however, their performance in these two areas was well below a traditional passing grade. The results also indicated that entering students, on average, know very little about ratio and proportions (28%), percentages (29%), statistics (31%), and fractions (32%). These results seem to support the difficulty developmental students have as they enter college.

Table 15
Diagnostic Mathematics (Pre-Algebra Domain) for MATH 0001 in Percents

Statistic	MATH 0001 Integers	MATH 0001 Fractions	MATH 0001 Decimals	MATH 0001 Exponents & Square Roots	MATH 0001 Ratios & Proportions	MATH 0001 Percentages	MATH 0001 Averages
mean	48.4	32.6	54.4	42.5	31.0	31.7	36.6
median	43	32	52	40	28	29	31
s.d.	19.0	15.7	12.3	19.2	13.0	16.6	17.4
n	51	51	51	51	51	51	51

Mathematics 0002 Diagnostic Assessment

As a comparison, the same pre-algebra diagnostic was given to a sample of students (n = 47) taking the second developmental mathematics (MATH 0002). While the students sampled did, on average, perform better in all categories than the MATH 0001 students, they still did not perform at a level that is considered in passing grade in five of the seven categories (see Table 16). This is troublesome give the fact that many of the students in the MATH 0002 course took and successfully completed the MATH 0001 course with an A, B, or C.

Table 16
Diagnostic Mathematics (Pre-Algebra Domain) for MATH 0002 in Percents

Statistic	MATH 0002 Integers	MATH 0002 Fractions	MATH 0002 Decimals	MATH 0002 Exponents & Square Roots	MATH 0002 Ratios & Proportions	MATH 0002 Percentages	MATH 0002 Averages
mean	55.9	43.1	60.1	50.0	33.3	40.9	41.0
median	55.0	41.0	62.0	51.0	33.0	36.0	38.0
s.d.	17.1	17.8	16.1	18.5	10.8	20.3	18.7
n	47	47	47	47	47	47	47

Updated Data on Developmental Mathematics November 2014

During the fall 2014 meeting, the mathematics faculty asked that the "outliers" be removed from the post test data in order to determine any possible information since it was a known fact that many students "Christmas Tree-ed" the answers to exit the test quickly. In fact, some students did not even read the questions.

For MATH 0001, 63 observations was decreased to 49 removing all students who scored lower on the post algebra test (see Table 17 and Table 18). However, removing the "outliers" accomplished very little as the mean increase with all students was 5.03 (see Table 11 and Table 12) compared to 8.1 with the "outliers" removed (see Table 17 and Table 18).

Table 17
Paired t test for results MATH 0001 removing students who scored lower on the post algebra assessment

	Pre Algebra Score	Post Algebra Score
Mean	20.14285714	28.24489796
Variance	12.41666667	90.64710884
Observations	49	49
Pearson Correlation	0.425550349	
Hypothesized Mean Difference	0	
df	48	
t Stat	-6.570290777	
P(T<=t) one-tail	1.6775E-08	
t Critical one-tail	1.677224196	

Table 18
MATH 0001 Difference in Mean Results with Outliers Removed

Difference in Algebra Scores	
Mean	8.102040816
Standard Error	1.233132762
Median	5
Mode	4
Standard Deviation	8.631929337
Sample Variance	74.51020408
Kurtosis	4.192778226
Skewness	1.944017608
Range	42
Minimum	0
Maximum	42
Sum	397
Count	49
Confidence Level (95.0%)	2.479379593

Given the results on the COMMPASS algebra assessment, the COMPASS pre-algebra scores were examined since 36 students had both a pretest and posttest pre-algebra score (see Table 19 and Table 20). While the t-test was statistically significant, the mean increase was only 7.5 points for a post test score of 36.8 meaning that the majority of the students would not have tested into MATH 0002 on the COMPASS Pre-Algebra Assessment given that a minimum pre-algebra score of 44 is needed. In fact, a further analysis of the data indicated that only one student would have placed into MATH 0002 if the posttest pre-algebra had been used as placement.

Table 19
Paired t test results for MATH 0001 using the Pre-Algebra Assessment

	Pre Pre-Algebra	Post Pre-Algebra
Mean	28.80555556	36.88888889
Variance	88.33253968	106.5015873
Observations	36	36
Pearson Correlation	0.214809484	
Hypothesized Mean Difference	0	
df	35	
t Stat	-3.91888919	
P(T<=t) one-tail	0.000197253	
t Critical one-tail	1.689572458	

Table 20
MATH 0001 Difference in Mean Results on the Pre-Algebra Assessment

Difference	
Mean	7.514285714
Standard Error	2.040090387
Median	3
Mode	2
Standard Deviation	12.06933749
Sample Variance	145.6689076
Kurtosis	-0.817064411
Skewness	0.625293292
Range	40
Minimum	-8
Maximum	32
Sum	263
Count	35
Confidence Level (95.0%)	4.145962488

The "outliers" were also removed from the MATH 0002 data using the COMPASS Algebra Assessment (see Table 21 and Table 22). Decreasing the sample from 112 to 92 by removing all students who scored less on the posttest increased the mean difference to 11.1 and the posttest score to 36.1 (see Table 21 and Table 22) compared to an original mean difference of 8.1 and a posttest score of 33.7 (see Table 13 and Table 14).

Table 21
Paired t test for results MATH 0002 removing students who scored lower on the post algebra assessment

	Pre Algebra Score	Post Algebra Score
Mean	25.06451613	36.08602151
Variance	44.64796634	166.5794764
Observations	93	93
Pearson Correlation	0.635669277	
Hypothesized Mean Difference	0	
df	92	
t Stat	-10.54543298	
P(T<=t) one-tail	8.20618E-18	
t Critical one-tail	1.661585397	

Table 22
Difference for MATH 0002 removing students who scored lower on the post algebra assessment

Difference	
Mean	11.14130435
Standard Error	1.049603652
Median	9
Mode	9
Standard Deviation	10.06744456
Sample Variance	101.35344
Kurtosis	2.971955195
Skewness	1.615112242
Range	50
Minimum	0
Maximum	50
Sum	1025
Count	92
Confidence Level (95.0%)	2.084908716

While statistically significant without the "outliers", only 23 (25%) of the 92 students met the minimum score of 44 on the algebra assessment to place into college level mathematics.

Comments on Developmental Mathematics

It is worth mentioning that the results generated by this study are by no means conclusive. First time freshmen students should probably be tested over two full years in order to generate more conclusive results. For MATH 0001 and MATH 0002, the results will be discussed with the faculty to gain an additional perspective.

On a positive note, the modular mathematics program is showing positive gains in success and student learning. As a result, one recommendation is to monitor the data for incoming freshmen. It is possible

that students might have done better on the algebra diagnostic instead of the pre-algebra diagnostic having forgotten the basic material. Using the algebra domain for the pre-posttest and the pre-algebra domain for the diagnostic was probably confounded some of the results obtained from the diagnostic. As a result, a second recommendation is to diagnostically test students in both MATH 0001 and MATH 0002 using the algebra domain to obtain an additional data set.

<u>Updated Comments on Developmental Mathematics November 2014</u>

During the fall 2014 faculty meeting, the mathematics faculty asked that the "outliers" be removed from the data. Removing so increased the mean difference and thus the posttest score; however, the results were similar between the new data set and the original data set. The mathematics faculty noted some possible reasons for the results during the fall 2014 meeting:

- Students were not receiving a grade.
- Students were not able to prepare.
- Increased variance points to increased effort on the part of some students.
- Students were being tested in every subject and were probably suffering from testing fatigue.

Final Comments

The data contained in this report represents the first time comprehensive data was sought for all developmental courses at LSU Eunice compared to a national benchmark. The report not only sought to assess incoming freshmen and continuing students at the beginning of their developmental coursework, but at the end of the end as well. Posttesting permitted an examination of the effectiveness of the courses both in terms of the statistical significance of the difference of the means and in terms of students achieving ACT's benchmark for college level readiness allowing for a comparison to a national population. As mentioned several times throughout the report, assessment in one semester does not provide conclusive results. Additional data should be collected using the same methodology for developmental writing and reading. Mathematics should be tested using the algebra domain for both assessments.

Questions about the data in this report should be sent to Dr. Paul Fowler at pfowler@lsue.edu.