

# Assessment Test Comparison Study Presentation for Campus Dialogue

James E. Smith, Ph.D.  
Director of Research and Planning

# Assessment Test Comparison Study

- **Compares test from three sources:**
  - **Locally developed tests (LDT)**
    - Math and English
  - **Compass**
    - Math, English, and Reading
  - **Accuplacer**
    - Math, English, and Reading

- Compass
  - Math and English cut scores were established with the assistance of the Compass consultant.
- Accuplacer
  - Adopted from Crafton Hills College cut-scores
- Locally Developed
  - Established and adjusted as part of periodic reliability and validity reporting required by the State Chancellors Office (unchanged for this study)

**Cut-scores**

# Number of Tests Administered

Dates: Sept. 10, 2008 to January 6, 2009

N=2,393

Test	Accuplacer	Locally Developed Tests (LDT)	Compass	Total
English	633	901	668	2,393
Reading	633	847	640	2,120
Math	961	1268	756	2,985
Total tests	2,227	3,207	2,064	7,498

**Note:** For Reading, the LDTs and Compass are the same—1,487 (847+640) students were administered this test.

**Source:** DataTel

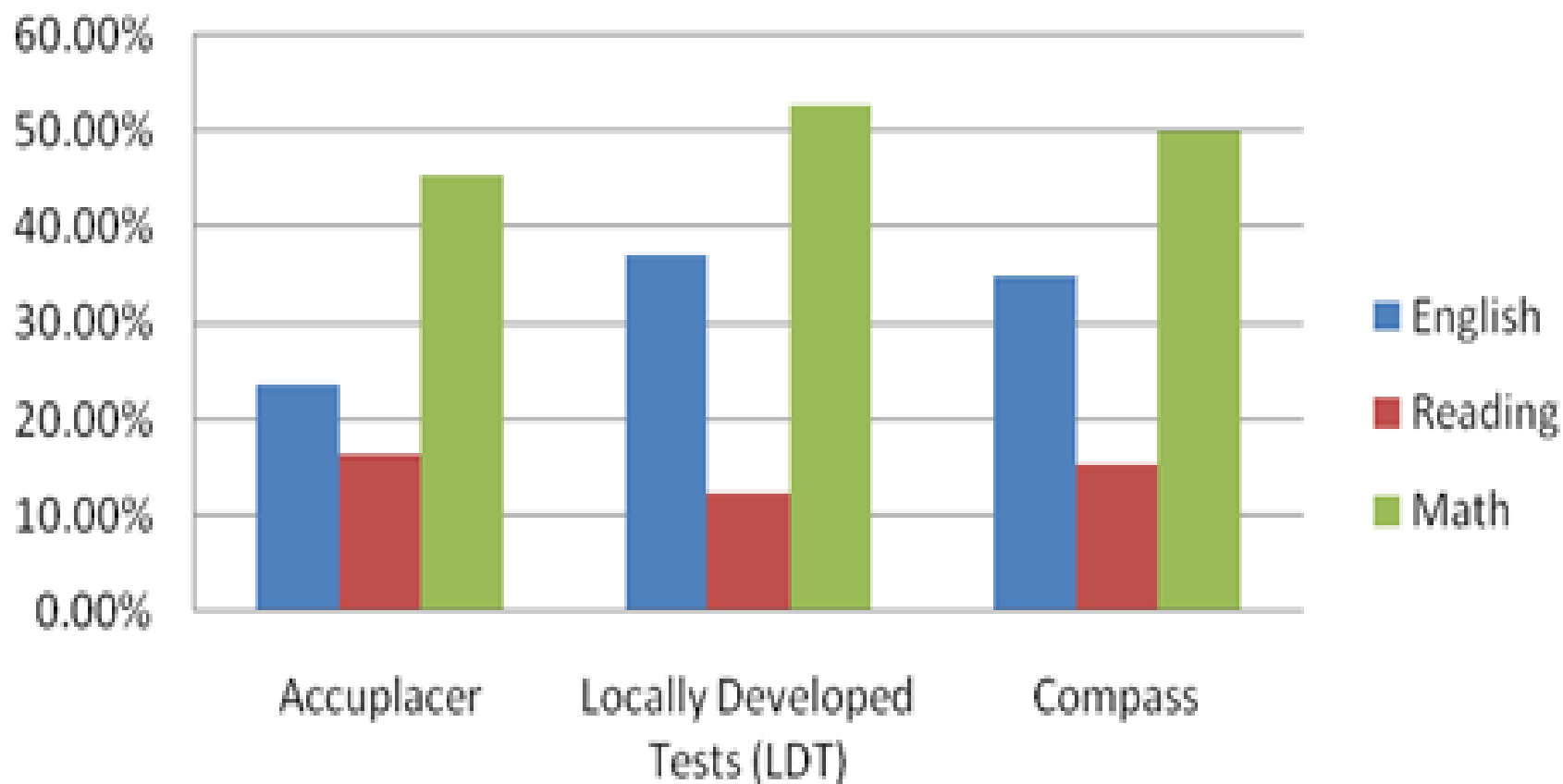
# Number of Students who Enrolled in class within one semester of Assessment

Test	Accuplacer	Locally Developed Tests (LDT)	Compass	Total
English	149	404	232	785
Reading	104	104	97	305
Math	436	667	377	1480
<b>Total tests</b>	<b>689</b>	<b>1175</b>	<b>706</b>	<b>2560</b>

# Percentage of Students who Enrolled within one term of being Assessed

Test	Accuplacer	Locally Developed Tests (LDT)	Compass	Average over all tests
English	23.54%	37.00%	34.73%	32.80%
Reading	16.43%	12.28%	15.16%	14.39%
Math	45.37%	52.60%	49.87%	49.58%
<b>Total tests</b>	<b>30.94%</b>	<b>36.64%</b>	<b>34.21%</b>	<b>34.28%</b>

## Percentage of Test-Takers who Enrolled in a Placement Course



- Placement and Prerequisite Survey
  - Student respondents
  - Faculty respondent
- Analysis of student performance measures
  - Retention
  - Grades (pass-rates)

**Mixed Method Analysis**  
**Qualitative and Quantitative**



# Placement and Prerequisite Surveys provided data for the qualitative analysis

**Students were asked to respond as following:**

- 1) Identify themselves by social security number or student ID#.
- 2) Identify their class by class code.
- 3) Indicate their level of preparation for the course.

- 1) Distribute the survey and read the instructions to students.
- 2) Collect completed surveys.
- 3) Enter an assessment of each student's academic preparation for the class (skill level).

**Instructors were asked to...**

**The Scale for Rating  
Preparation for the class was  
measured using a self-  
reported five point scale**

- A) Yes, overqualified.
- B) Yes, very much so.
- C) Yes, but not completely.
- D) Yes, but just barely.
- E) No, not at all.

# Student Ratings

Test	N	Percentage of students who indicated they were sufficiently qualified to take the course.	Percentage of students who indicate they were overqualified.
Compass English (COMPENGL)	60	92%	10%
Compass Reading (S99READ)	58	95%	10%
Compass Reading (COMPREAD)	48	89%	10%
Compass Math-1 (COMPMT1)	60	90%	10%
Compass Math-2 (COMPMT2)	10*	90%*	30%*
Locally maintained Pre-Algebra (F04PRE)	93	92%	6.4%
Locally maintained Elementary Algebra (F04ELEM)	94	95%	11%
Locally maintained intermediate Algebra (F04INT)	58	91%	10%
Locally maintained College Algebra (F04CALG)	29	84%	12%
Locally maintained English (F04ENGL)	207	91%	13%
Accuplacer Arithmetic (VACCUARITH)	43	88%	12%
Accuplacer Algebra (VACCUALG)	42	91%	12%
Accuplacer level Math (VACCUCLM)	17*	90%*	14%*
Accuplacer Reading (VACCUREAD)	40	91%	11%
Accuplacer English (VACCUSENT)	55	89%	11%

# Faculty

Test	Student N	Percentage of faculty who indicated students were sufficiently qualified to take the course.	Percentage of faculty who indicated that students were over qualified.
Compass English (COMPENGL)	60	89%	3.7%
Compass Reading (S99READ)	58	88%	6.4%
Compass Reading (COMPREAD)	48	76%	1.7%
Compass Math-1 (COMPMTH1)	60	75%	1.7%
Compass Math-2 (COMPMTH2)	10*	90%	0%
Locally maintained Pre-Algebra (F04PRE)	93	77%	3.2%
Locally maintained Elementary Algebra (F04ELEM)	94	73%	7.1%
Locally maintained intermediate Algebra (F04INT)	58	66%	5.5%
Locally maintained College Algebra (F04CALG)	29	81%	7.3%
Locally maintained English (F04ENGL)	207	77%	6.7%
Accuplacer Arithmetic (VACCUARITH)	43	72%	2.3%
Accuplacer Algebra (VACCUALG)	42	74%	0%
Accuplacer level Math (VACCUCLM)	17*	71%	0%
Accuplacer Reading (VACCUREAD)	40	75%	1.8%
Accuplacer English (VACCUSENT)	55	68%	6.5%

# Student/Faculty Agreement

Test	N	Correlation between student and faculty assessments.
Compass English (COMPENGL)	60	.432
Compass Reading (S99READ)	58	.381
Compass Reading (COMPREAD)	48	.392
Compass Math-1 (COMPMT1)	60	.352
Compass Math-2 (COMPMT2)	10*	.415
Locally maintained Pre-Algebra (F04PRE)	93	.431
Locally maintained Elementary Algebra (F04ELEM)	94	.390
Locally maintained intermediate Algebra (F04INT)	58	.375
Locally maintained College Algebra (F04CALG)	29	.451
Locally maintained English (F04ENGL)	207	.386
Accuplacer Arithmetic (VACCUARITH)	43	.399
Accuplacer Algebra (VACCUALG)	42	.334
Accuplacer level Math (VACCUCLM)	17*	.103
Accuplacer Reading (VACCUREAD)	40	.303
Accuplacer English (VACCUSENT)	55	.301

**Table 6. Comparison of Assessment Tests Over All English Courses**

Grade	Accuplacer	Locally Developed	Compass
A	10.7%	17.5%	14.4%
B	25.3%	20.4%	20.3%
C	22.7%	20.4%	16.9%
D	6.7%	10.4%	13.6%
F	17.3%	12.3%	13.6%
I	1.3%		.8%
W	16.0%	19.0%	20.3%
	100.0%	100.0%	100.0%
<b>Pass-rate</b>	<b>58.7</b>	<b>58.3</b>	<b>51.7</b>
<b>Retention</b>	<b>84.0%</b>	<b>81%0</b>	<b>79.7%</b>
Missing (unofficial drops)	49.7%	47.8%	49.1%
N	149	404	232

Source: DataTel

**Table 7. Comparison of assessment tests for English 914 placement**

<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	9.1%	15.5	<b>20.9%</b>
B	54.5	26.2	<b>20.9</b>
C	27.3	17.9	<b>16.3</b>
D	0.0	9.5	<b>7.0</b>
F	9.1	11.9	<b>14.0</b>
I	0.0	0.0	0.0
W	0.0	19.0	<b>20.9</b>
Total	100.0	100.0	100.0
<i>Pass-rate</i>	<b>90.1%</b>	<b>59.5%</b>	<b>58.1%</b>
<i>Retention</i>	<b>100%</b>	<b>81%</b>	<b>79.1%</b>
Missing (unofficial drops)	52.2%	56.5%	47.6%
N	<b>*23</b>	193	82
	<b>23/149=15%</b>	193/404=47%	82/232=35%

(\*) The N for this group is too small to analyze



**Table 8. Comparison of assessment tests for English 015 placement**

<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	7.7%	19.1%	12.1%
B	20.5%	15.5%	15.2%
C	25.6%	22.7%	21.2%
D	10.3%	10.0%	27.3%
F	15.4%	12.7%	12.1%
I	2.6%	0.0%	0.0%
W	17.9%	20.0%	12.1%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b><i>Pass-rate</i></b>	<b><i>53.8%</i></b>	<b><i>57.3%</i></b>	<b><i>48.5%</i></b>
<b><i>Retention</i></b>	<b><i>82.1%</i></b>	<b><i>80.0%</i></b>	<b><i>87.9%</i></b>
<b>Missing (unofficial drops)</b>	<b>48.7</b>	<b>40</b>	<b>51.5</b>
<b>N</b>	<b>76/146=52%</b>	<b>184/404=46%</b>	<b>68/232=29%</b>

**Table 9. Comparison of assessment tests for English 101 placement**

Grade	Accuplacer	Locally Developed	Compass
A	20.0%	27.3%	12.9
B	20.0%	27.3%	29.0
C	15.0%	18.2%	9.7
D	0	9.1%	3.2
F	30.0%	9.1%	16.1
I	0	0%	3.2
W	15.0%%	9.1%	25.8%
Total	100.0%	100.0%	100.0
<i>Pass-rate</i>	<i>55%</i>	<i>72.7%</i>	<i>51.6%</i>
<i>Retention</i>	<i>85.0%</i>	<i>90.9%</i>	<i>74.2%</i>
Missing (unofficial drops)	52.6	35.3	54.4
N	38/146=26%	*17/404=4%	57/232=25%

(\*) The N for this group is too small to analyze

# All Reading Courses—910, 920, 950, 015, 100

**Table 10. Comparison of Assessment Tests Over All Reading Courses**

<b>Grade</b>	<b>Accuplacer</b>	<b>Compass (LDT)</b>
A	37.0%	23.5%
B	17.4%	10.6%
C	17.4%	15.3%
D	6.5%	11.8%
F	10.9%	11.8%
I	0.0%	0%
W	10.9%	27.1%
Total	100.0%	100.0%
<b><i>Pass-rate (A-C)</i></b>	<b><i>71.7%</i></b>	<b><i>49.9%</i></b>
<b><i>Retention</i></b>	<b><i>89.1%</i></b>	<b><i>72.9%</i></b>
Missing (unofficial drops)	54.9%	55.6%
N	104	168

# Reading 950

**Table 11. Placement-test Comparison of Assessment Tests—  
READ-950**

<b>Grade</b>	<b>Accuplacer</b>	<b>Compass (LDT)</b>
A	37.5	9.5%
B	18.8%	14.3%
C	18.8%	28.6%
D	6.3%	14.3%
F	6.3%	14.3%
I	0.0%	0.0%
W	12.5%	19.0%
Total	100.0%	100.0
<i>Pass-rate (A-C)</i>	<i>75%</i>	<i>61.5%</i>
<i>Retention</i>	<i>87.5%</i>	<i>81.0%</i>
Missing (unofficial drops)	54.9%	49%
N	33/104=33%	21/168=12.5%

(\* ) The N for this group is too small to analyze

# All Math Courses

**Table 12. Comparison of Assessment Tests Over All Math Courses**

Grade	Accuplacer	Locally developed	Compass
A	30.1%	19.0%	27.9%
B	19.9%	22.6%	19.4%
C	15.4%	16.1%	10.4%
D	5.3%	7.5%	7.7%
F	19.5%	15.3%	15.3%
I	0.0%	0.0%	0.0%
W	9.8%	19.5%	18.9%
Total	100.0%	100.0%	100.0%
<i>Pass-rate</i>	<b>65.4%</b>	<b>57.3%</b>	<b>57.7%</b>
<i>Retention</i>	<b>91.2%</b>	<b>80.5%</b>	<b>81.1%</b>
Missing (unofficial drops)	51.4%	45.9%	43.9%
N	436	667	377

For math courses as a whole, Accuplacer has a higher pass-rate and retention rate than the LDT and Compass tests

**Table 13. Assessment test Comparison – Math-942**

<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	21.8%	16.9v	22.0%
B	26.7%	23.7%	19.3%
C	15.8%	10.2%	12.8%
D	7.9%	18.6%	10.1%
F	19.8%	16.9%	18.3%
I	0.0%	0.0%	0.0%
W	7.9%	13.6%	17.4%
Total	100.0%	100.0%	100.0%
<b>Pass-rate (A-C)</b>	<b>64.4%</b>	<b>50.8%</b>	<b>54.1%</b>
<b>Retention</b>	<b>92.1</b>	<b>86.4%</b>	<b>82.6</b>
Missing (unofficial drops)	48.2%	51.6%	40.1%
N	195/436=45%	122/667=18%	182/377=48%

**Table 14. Assessment test Comparison – Math-952**

<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	25.0%	15.7%	55.0%
B	10.0%	28.4%	17. %5
C	25.0%	22.4%	7.5%
D	10.0%	3.0%	7.5%
F	15.0%	13.4%	0.0
I	0.0	0.0%	0.0
W	15.0%	17.2%	12.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<i>Pass-rate (A-C)</i>	<i>64.4%</i>	<i>66.4%</i>	<i>88%</i>
<i>Retention</i>	<i>85.0%</i>	<i>82.8%</i>	<i>87.5%</i>
Missing (unofficial drops)	68.8%	43.7%	57.9%
<i>N</i>	<i>64/436=15%</i>	<i>238/667=36%</i>	<i>95/377=25%</i>

**Table 16. Assessment test Comparison – Math-095**

<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	58.7%	10.3%	*N/A
B	13.0%	25.6%	*N/A
C	10.9%	23.1%	*N/A
D	2.2%	5.1%	*N/A
F	4.3%	2.6%	*N/A
I	0.0%	0.0%	*N/A
W	10.9%	33.3%	*N/A
Total	100.0%	100.0%	*N/A
<b>Pass-rate (A-C)</b>	<b>82.6%</b>	<b>59.0%</b>	<b>*N/A</b>
<b>Retention</b>	<b>96.1%</b>	<b>66.7%</b>	<b>*N/A</b>
Missing (unofficial drops)	36	50	*N/A
N	82/436=19%	89/667=13%	*4/377=1%



**Table 16. Assessment test Comparison – Math-095**

<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	58.7%	10.3%	*N/A
B	13.0%	25.6%	*N/A
C	10.9%	23.1%	*N/A
D	2.2%	5.1%	*N/A
F	4.3%	2.6%	*N/A
I	0.0%	0.0%	*N/A
W	10.9%	33.3%	*N/A
Total	100.0%	100.0%	*N/A
<i>Pass-rate (A-C)</i>	<b>82.6%</b>	<b>59.0%</b>	<b>*N/A</b>
<i>Retention</i>	<b>96.1%</b>	<b>81.4%</b>	<b>*N/A</b>
Missing (unofficial drops)	36	50	*N/A
N	82/436=19%	89/667=13%	*4/377=1%

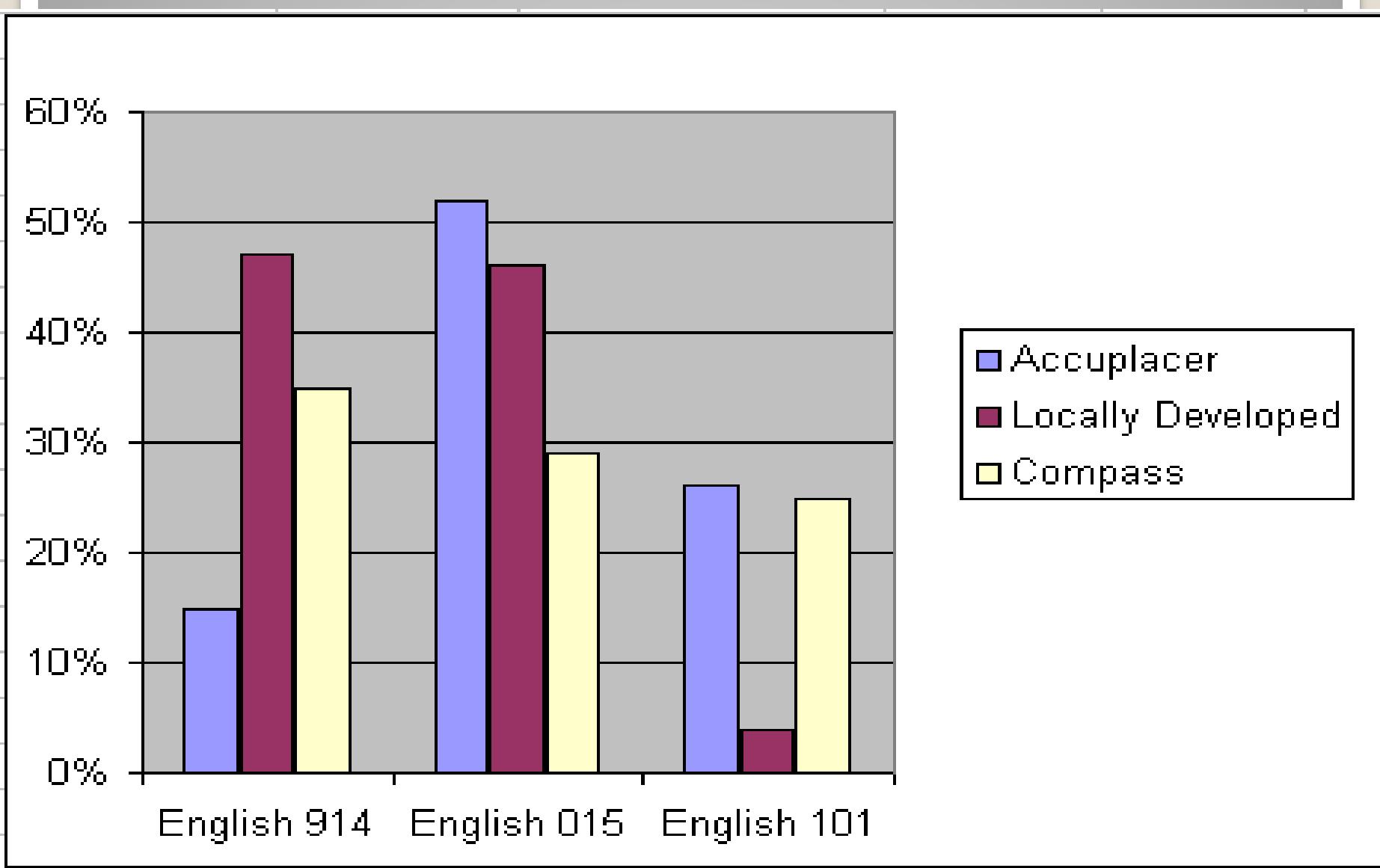
(\*) The N for this group is too small to analyze

**Table 17. Assessment test Comparison – Math-102**

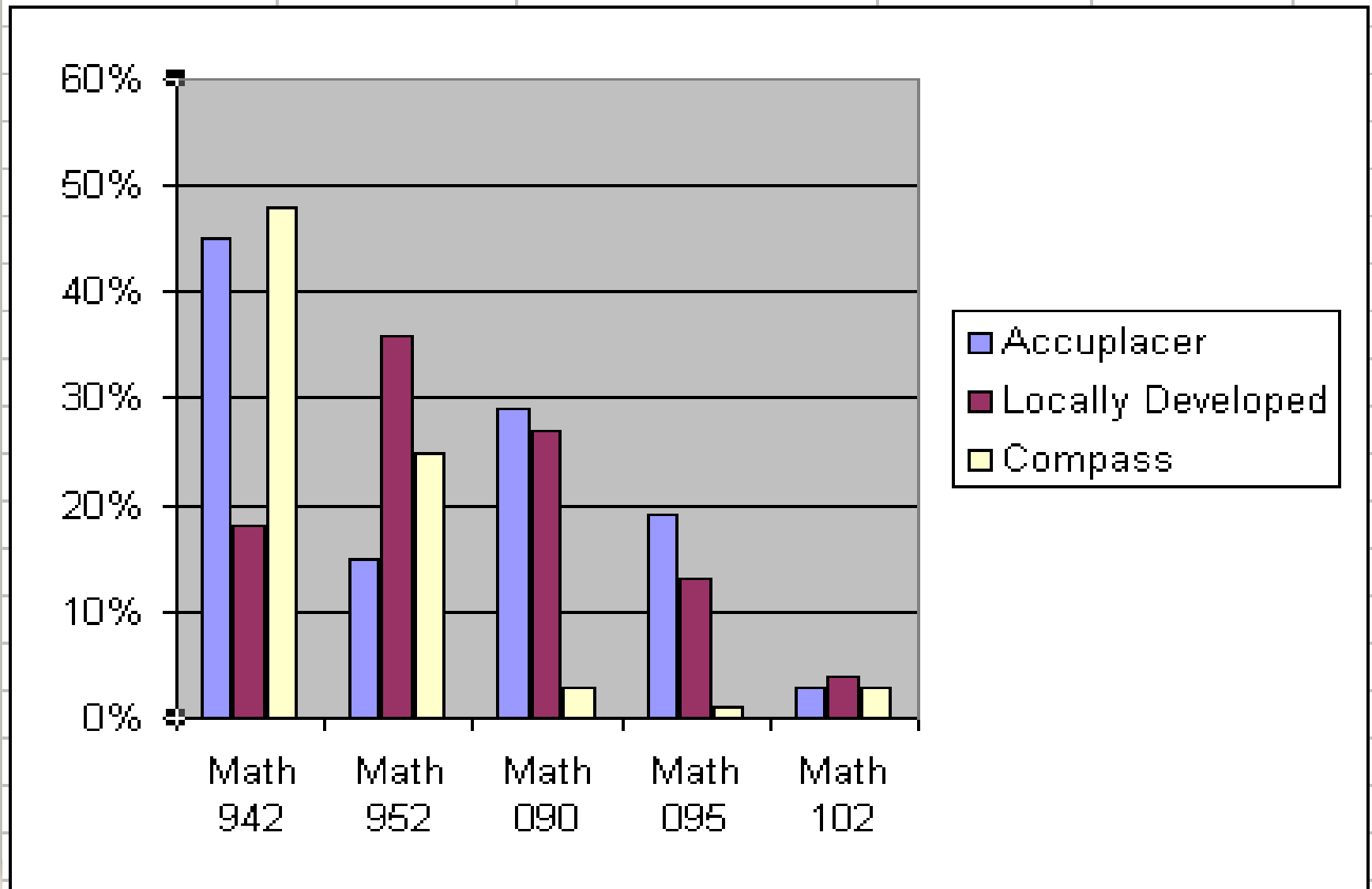
<b>Grade</b>	<b>Accuplacer</b>	<b>Locally Developed</b>	<b>Compass</b>
A	33.3	20.0	0.0.0
B	33.3	10.0	20.0
C	0.0	10.0	40.0
D	0.0	10.0	0.0
F	0.0	30.0	40.0
I			
W	33.3	20.0	61.5
Total	100.0	100.0	100.0
<i>Pass-rate (A-C)</i>	<i>66.7</i>	<i>40.0</i>	<i>60.0</i>
<i>Retention</i>	<i>66.7</i>	<i>80.0</i>	<i>39.5</i>
Missing (unofficial drops)	3	17	48
N	*12/436=3%	*27/667=4%	*13/377=3%

(\*) The N for this group is too small to analyze

# Placement Percentages by Course



# Placement Percentages by test



# Conclusion

- Placement and Prerequisite Survey Results
  - All tests demonstrated a minimum level of satisfaction with placement
  - English LDT showed a slightly higher level of agreement with the minimum level of placement
- Student performance measures
  - All tests meet minimum criteria
  - Overall, Accuplacer showed the strongest pass-rates and retention particularly for math