

Math Research Report, Fall 2006
Requested by Alison Damoose and Toni Parsons

Considerations

- Data for individual terms yielded Ns that were too small for analysis. In order to increase the N, data were aggregated across terms. Term-by-term data are available upon request for select reports.
- “Successful” enrollment in a course, or course “success”, is defined as an enrollment which earned a grade of A, B, C, or Credit Received.
- Analysis for this report excluded enrollments in which the grade = “Dropped” or “Never Attended”

Math 35: On-campus v. Online: Fall 2004 to Spring 2006

- The success rates for Math 35 on-campus students (59.4%) and online students (60.2%) were very similar. *See Table 3.*
- The success rate in the subsequent Math 95 course was higher for students who successfully completed Math 35 online (76.9%) than for those who successfully completed Math 35 on-campus (48.4%). However, caution should be exercised as the number of successful completers of Math 35 online (N = 13) was too small to draw any sound conclusions. *See Table 4.*
- The higher success rate in Math 95 for students who successfully completed Math 35 online may partly be explained by the fact that Math 35 online students tended much more to be older, female, and continuing students compared to Math 35 on-campus students, who tended to be younger and new to college. *See Table 2.*
- The percentage of successful Math 35 students who went on to enroll in Math 95 was much higher for on-campus (48.0%) than for online (7.2%). *Compare Tables 3 and 4.*

Math Success Rates In Relation to Successful Enrollment in Personal Growth 127 (PG 127): Fall 2003 to Spring 2006

- Success rates in Math 35, Math 95, and subsequently in Math 96 were examined in relation to whether the student *successfully* completed Personal Growth 127 (PG 127) prior to or concurrently with the math course. Math success rates were also examined for students who either enrolled in PG 127 after the math course or never enrolled at all in PG 127. Examination of math success rates also included students who enrolled in the PG 127 / Math 95 Learning Community.
- The Math 35 success rate was lowest for students who enrolled in PG 127 within 4 terms prior to taking Math 35 (50.7%) and was highest for students who enrolled concurrently in PG 127 and Math 35 (69.6%). The Math 35 success rate for students who either enrolled in PG 127 after Math 35 or never enrolled at all in PG 127 fell somewhere in between at 57.4%. *See Table 5.*
- The Math 95 success rate was lowest for students who enrolled in PG 127 within 4 terms prior to taking Math 95 (39.0%) and was higher for students who enrolled concurrently in PG 127 and Math 95 (67.2%). The Math 95 success rate for students who either enrolled in PG 127 after Math 95 or never enrolled at all in PG 127 fell somewhere in between at 47.6%. Students who enrolled in the PG 127 / Math 95 Learning Community earned the highest success rate of all (82.3%). *See Table 6.*

- Likewise, the proportion of Math 95 students who went on to enroll in Math 96 was lowest for those who enrolled in PG 127 within 4 terms prior to taking Math 95 (28.1%) and was higher among students who enrolled concurrently in Math 95 and PG 127 (55.7%) than. The percentage of Math 96 persisters among students who either enrolled in PG 127 after Math 95 or never enrolled at all in PG 127 fell somewhere in between at 30.9%. Students who enrolled in the PG 127 / Math 95 Learning Community earned the highest rate of continuation to Math 96 (69.4%). *Compare Tables 6 and 7.*
- Students who enrolled in PG 127 within 4 terms prior to taking Math 95 showed the lowest success rate in the subsequent Math 96 course. The Math 96 success rates were highest for students who enrolled in PG 127 concurrently with Math 95 (60.3%) and students who either enrolled in PG 127 after Math 95 or never enrolled at all in PG 127 (59.7%). The Math 96 success rate for students who enrolled in the PG 127 / Math 95 Learning Community fell somewhere in between at 55.8%. *See Table 7.*

Conclusions

- The group of students who never enrolled at all in PG 127 is not an ideal comparison group because it likely comprised students who felt confident that they already possessed the necessary study skills.
- The Math 35 and Math 95 success rate data and the data on rate of continuation from Math 95 to Math 96 suggest that taking PG 127 prior to the math course is not as effective as taking PG 127 and the math course concurrently. The Math 95 data suggest that taking the PG 127 / Math 95 Learning Community course seems to be the most effective practice of all.

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TABLE 2. Math 35 Student Profile: On-campus v. Online^{1, 2}
Fall 2004 to Spring 2006

AGE	Math 35 Course Modality				Total	
	On-campus		Online			
	Count	%	Count	%	Count	%
Under 18	56	3.0	0	0.0	56	2.7
18 - 24	1,410	74.4	91	50.3	1,501	72.3
25 - 29	223	11.8	36	19.9	259	12.5
30 - 39	130	6.9	37	20.4	167	8.0
40 - 49	55	2.9	13	7.2	68	3.3
50 and >	20	1.1	4	2.2	24	1.2
Total	1,894	100.0	181	100.0	2,075	100.0

GENDER	Math 35 Course Modality				Total	
	On-campus		Online			
	Count	%	Count	%	Count	%
FEMALE	1,027	54.2	137	75.7	1,164	56.1
MALE	866	45.7	44	24.3	910	43.9
Unknown	1	0.1	0	0.0	1	0.0
Total	1,894	100.0	181	100.0	2,075	100.0

ENROLLMENT STATUS	Math 35 Course Modality				Total	
	On-campus		Online			
	Count	%	Count	%	Count	%
CURRENT HIGH SCHOOL STUDENT	8	0.4	1	0.6	9	0.4
FIRST-TIME STUDENT	293	15.5	4	2.2	297	14.3
FIRST-TIME TRANSFER STUDENT	146	7.7	8	4.4	154	7.4
RETURNING TRANSFER STUDENT	18	1.0	2	1.1	20	1.0
RETURNING STUDENT	113	6.0	8	4.4	121	5.8
CONTINUING STUDENT	1,310	69.2	158	87.3	1,468	70.7
UNKNOWN	6	0.3	0	0.0	6	0.3
Total	1,894	100.0	181	100.0	2,075	100.0

¹Numbers based on enrollments in Math 35, not student headcount

²Does not include enrollments where grade = "Dropped" or "Never Attended"

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¹Numbers based on enrollments in Math 35, not student headcount

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**TABLE 3. Math 35 Grade Distributions and Success Rates: On-campus v. Online¹
Fall 2004 to Spring 2006**

		Math 35 Course Modality					
		On-campus		Online		Total	
		Count	%	Count	%	Count	%
LETTER GRADE RECEIVED IN MATH 35	LETTER GRADE A	375	19.8	63	34.8	438	21.1
	LETTER GRADE B	433	22.9	29	16.0	462	22.3
	LETTER GRADE C	283	14.9	16	8.8	299	14.4
	CREDIT RECEIVED	21	1.1	1	0.6	22	1.1
	NO CREDIT RECEIVED	3	0.2	0	0.0	3	0.1
	LETTER GRADE D	150	7.9	14	7.7	164	7.9
	LETTER GRADE F	280	14.8	22	12.2	302	14.6
	INCOMPLETE GIVEN	4	0.2	0	0.0	4	0.2
	INCOMPLETE WITH DEFAULT GRADE	0	0.0	0	0.0	0	0.0
	WITHDREW	324	17.1	36	19.9	360	17.3
	IN PROGRESS	0	0.0	0	0.0	0	0.0
	REPORT DELAYED	21	1.1	0	0.0	21	1.0
	Total	1,894	100.0	181	100.0	2,075	100.0
SUCCESS RATE²		59.4%		60.2%		59.4%	

¹Numbers based on enrollments in Math 35, not student headcount

²Success Rate = Grade (A, B, C, Credit Received) / (A, B, C, Credit Received, No Credit, D, F, Incomplete, Withdrew)

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**TABLE 4. Successful On-campus v. Online Math 35 Enrollments Matched with Subsequent Math 95 Grades^{1, 2}
Enrolled in Math 35 from Fall 2004 to Fall 2005**

		Math 35 Course Modality					
		on-campus		online ⁵		Total	
		Count	N %	Count	N %	Count	N %
LETTER GRADE	LETTER GRADE A	107	11.8	2	15.4	109	11.8
RECEIVED IN MATH 95⁴	LETTER GRADE B	132	14.5	3	23.1	135	14.6
(Subsequent to Math 35, through Spring 2006)	LETTER GRADE C	184	20.2	5	38.5	189	20.5
	CREDIT RECEIVED	17	1.9	0	0.0	17	1.8
	NO CREDIT RECEIVED	9	1.0	0	0.0	9	1.0
	LETTER GRADE D	86	9.5	3	23.1	89	9.7
	LETTER GRADE F	167	18.4	0	0.0	167	18.1
	INCOMPLETE GIVEN	6	0.7	0	0.0	6	0.7
	INCOMPLETE WITH DEFAULT GRADE	0	0.0	0	0.0	0	0.0
	WITHDREW	201	22.1	0	0.0	201	21.8
	IN PROGRESS	0	0.0	0	0.0	0	0.0
	REPORT DELAYED	0	0.0	0	0.0	0	0.0
	Total	909	100.0	13	100.0	922	100.0
SUCCESS RATE³		48.4%		76.9%		48.8%	

¹Numbers based on enrollments in Math 35, not student headcount

²Based on successful Math 35 enrollments only (grade = A, B, C, or Credit Received)

³Success Rate = Grade (A, B, C, Credit Received) / (A, B, C, Credit Received, No Credit, D, F, Incomplete, Withdrew)

⁴In cases where the student enrolled in Math 95 multiple times, the highest grade was taken

⁵Caution: Math 35 online cohort has very small N

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**TABLE 5. Math 35 Grade Distributions and Success Rates in Relation to Enrollment in Personal Growth 127¹
Fall 2003 to Spring 2006**

		Enrollment in PG 127 ³							
		Did not enroll in PG 127		Enrolled in PG 127 prior to Math 35 ⁴		Enrolled in PG 127 concurrently with Math 35		Total	
		Count	N %	Count	N %	Count	N %	Count	N %
LETTER GRADE RECEIVED IN MATH 35	LETTER GRADE A	659	22.8%	15	10.6%	17	14.5%	691	21.9%
	LETTER GRADE B	589	20.4%	28	19.7%	36	30.8%	653	20.7%
	LETTER GRADE C	381	13.2%	28	19.7%	26	22.2%	435	13.8%
	CREDIT RECEIVED	22	0.8%	1	0.7%	1	0.9%	24	0.8%
	NO CREDIT RECEIVED	7	0.2%	0	0.0%	0	0.0%	7	0.2%
	LETTER GRADE D	196	6.8%	14	9.9%	12	10.3%	222	7.0%
	LETTER GRADE F	441	15.2%	26	18.3%	14	12.0%	481	15.3%
	INCOMPLETE GIVEN	6	0.2%	0	0.0%	0	0.0%	6	0.2%
	INCOMPLETE WITH DEFAULT GRADE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	WITHDREW	574	19.8%	30	21.1%	9	7.7%	613	19.4%
	IN PROGRESS	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	REPORT DELAYED	19	0.7%	0	0.0%	2	1.7%	21	0.7%
	Total	2,894	100.0%	142	100.0%	117	100.0%	3,153	100.0%
SUCCESS RATES ²		57.4%		50.7%		69.6%		57.6%	

¹Numbers based on enrollments in Math 35, not student headcount

²Success Rate = Grade (A, B, C, Credit Received) / (A, B, C, Credit Received, No Credit, D, F, Incomplete, Withdrew)

³Only includes successful PG 127 enrollments (grade = A, B, C, or Credit Received)

⁴Within 4 terms prior

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TABLE 6. Math 95 Grade Distributions and Success Rates in Relation to Enrollment in Personal Growth 127¹
Fall 2003 to Spring 2006

		Enrollment in Personal Growth 127 ³									
		Did not enroll in PG 127		Enrolled in PG 127 prior to Math 95 ⁴		Enrolled in PG 127 concurrently with Math 95		Enrolled in MATH 95 Learning Community		Total	
		Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
LETTER GRADE RECEIVED IN MATH 95	LETTER GRADE A	747	13.2%	25	8.0%	20	15.3%	9	14.5%	801	13.0%
	LETTER GRADE B	918	16.3%	45	14.4%	31	23.7%	19	30.6%	1,013	16.5%
	LETTER GRADE C	975	17.3%	49	15.7%	36	27.5%	21	33.9%	1,081	17.6%
	CREDIT RECEIVED	45	0.8%	3	1.0%	1	0.8%	2	3.2%	51	0.8%
	NO CREDIT RECEIVED	35	0.6%	3	1.0%	0	0.0%	1	1.6%	39	0.6%
	LETTER GRADE D	489	8.7%	34	10.9%	10	7.6%	8	12.9%	541	8.8%
	LETTER GRADE F	1,009	17.9%	68	21.7%	23	17.6%	1	1.6%	1,101	17.9%
	INCOMPLETE GIVEN	21	0.4%	0	0.0%	0	0.0%	0	0.0%	21	0.3%
	INCOMPLETE WITH DEFAULT GRADE	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	WITHDREW	1,397	24.8%	86	27.5%	10	7.6%	1	1.6%	1,494	24.3%
	IN PROGRESS	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	REPORT DELAYED	2	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.0%
	Total	5,638	100.0%	313	100.0%	131	100.0%	62	100.0%	6,144	100.0%
SUCCESS RATE ²		47.6%		39.0%		67.2%		82.3%		48.0%	

¹Numbers based on enrollments in Math 95, not student headcount

²Success Rate = Grade (A, B, C, Credit Received) / (A, B, C, Credit Received, No Credit, D, F, Incomplete, Withdrew)

³Only includes successful PG 127 enrollments (grade = A, B, C, or Credit Received)

⁴Within 4 terms prior

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**TABLE 7. Successful Math 95 (and Personal Growth 127) Enrollments Matched with Subsequent Math 96 Grades¹
Enrolled in Math 95 from Fall 2003 to Fall 2005**

		Enrollment in Personal Growth 127 in Relation to Math 95 ³									
		Did not enroll in PG 127		Enrolled in PG 127 prior to Math 95 ⁴		Enrolled in PG 127 concurrently with Math 95		Enrolled in MATH 95 Learning Community		Total	
		Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
LETTER GRADE RECEIVED IN MATH 96 (Subsequent to Math 95, through Spring 2006)	LETTER GRADE A	239	16.2	9	14.3	9	13.0	1	2.4	258	15.6
	LETTER GRADE B	314	21.3	8	12.7	15	21.7	5	12.2	342	20.7
	LETTER GRADE C	330	22.3	15	23.8	17	24.6	17	41.5	379	23.0
	CREDIT RECEIVED	39	2.6	3	4.8	2	2.9	1	2.4	45	2.7
	NO CREDIT RECEIVED	8	0.5	0	0.0	1	1.4	2	4.9	11	0.7
	LETTER GRADE D	108	7.3	7	11.1	6	8.7	4	9.8	125	7.6
	LETTER GRADE F	179	12.1	9	14.3	7	10.1	7	17.1	202	12.2
	INCOMPLETE GIVEN	8	0.5	2	3.2	1	1.4	0	0.0	11	0.7
	INCOMPLETE WITH DEFAULT GRADE	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
	WITHDREW	251	17.0	10	15.9	11	15.9	4	9.8	276	16.7
	IN PROGRESS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	REPORT DELAYED	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	1,477	100.0	63	100.0	69	100.0	41	100.0	1,650	100.0
SUCCESS RATE ²		62.4%		55.6%		62.3%		58.5%		62.1%	

¹Numbers based on enrollments in Math 95, not student headcount

²Success Rate = Grade (A, B, C, Credit Received) / (A, B, C, Credit Received, No Credit, D, F, Incomplete, Withdrew)

³Only includes successful Math 95 and PG 127 enrollments (grade = A, B, C, or Credit Received)

⁴Within 4 terms prior