SEEED COMMITTEE:

CURRICULUM AND PEDADOGY SUB-COMMITTEE

FALL 2012 REPORT

PURPOSE

The Curriculum and Pedagogy sub-committee decided to look at what practices and processes in the algebra sequence impact equitable student success in statistics, the reason being that only 5% of pre-algebra students make it through the algebra sequence to transfer-level math.

METHOD

To this end, the sub-committee looked at the following through the auspices of the office of Planning, Research, and Institutional Effectiveness:

- How many students took Math 200, Bus 123, Psych 171 at Skyline (08/09-11/12)?
  - What were the success rates?
  - Of those students, how many students had Math 120 as their previous math course?
  - How is this enrollment disaggregated by ethnicity?

- What are the declared majors of our Elementary Algebra students (07/08-11/12)?
  - Do those majors lead into Statistics?

- What transfer level math classes do former Math 110 students (Fall 2009) take across the district?
  - How is this enrollment disaggregated by ethnicity?
  - What are the success rates?

RESULTS

By far, Math 200 is the most popular statistics course at Skyline College with a 71% share of student enrollment, as compared to Bus 123's share of 17% and Psyc 171's share of 13%. However, only 55-56% of students pass Math 200 or Bus 123, a stark contrast to the 86% of Psyc 171 students that are successful. And while roughly 40% of Psyc 171 and Math 200 students took Math 120 previously, only 22% of Bus 123 students did. As for ethnic breakdown, Math 200 and Bus 171 mirror the college as a whole, while Psyc 171 has a disproportionate share of Whites and Hispanics.

With regards to majors, 41% of elementary algebra students at Skyline College are undeclared and 29% are non-STEM.

District wide, Asians and Whites who took Elementary Algebra in 2009 had higher success rates in Trigonometry while their Filipino, Hispanic, and Black counterparts did better in Statistics:

Of SMCCD students who took Elementary Algebra in FALL 2009:						
Ethnicity	Math 200 Successes	Math 200 Enrollees	Math 200 Success Rate	Math 130 Successes	Math 130 Enrollees	Math 130 Success Rate
American Indian/Alaskan Native	0	0	0%	0	0	0%
Asian	11	17	65%	10	12	83%
Black - Non-Hispanic	3	8	38%	0	1	0%
Filipino	16	21	76%	3	8	38%
Hispanic	24	37	65%	9	18	50%
Multi Races	11	15	73%	1	1	100%
Pacific Islander	1	7	14%	0	0	0%
Unknown	19	23	83%	3	7	43%
White Non-Hispanic	29	41	71%	10	13	77%
Total	114	169	67%	36	60	60%

CONCLUSIONS

It appears that any intervention in the Algebra sequence should first and foremost be directed at improving success in Math 200, as opposed to Psyc 171 or Bus 123. That being said, the outstanding success rate of Psyc 171 demands further exploration, as does its disproportionate share of Whites and Hispanics. Furthermore, an intervention in the Algebra sequence would most likely benefit the Elementary Algebra students with non-STEM majors, a share of the classes that could be as high as 70%. Still, it is troubling to see that for the SMCCD Elementary Algebra students of Fall 2009, Whites and Asians did better in Trigonometry while and Filipinos, Hispanics, and Blacks did better in Statistics. Further research is most certainly needed.