

Sociology-Mike Price leading

Lisa Mentz-Notetaker

Group:

- Hyeyoung Woo
- Melanie Arthur
- Kelly Mercer
- Joe Ediger
- dMarie Carver
- Stephanie Yurastis

Q1.

Have to take 243 for major requirements. Usually gen ed then stats sequence. For PSU, math 95 to be admitted at regular student. If not Alg 2 or MA 95, you had to take math 95.

OIT-By the time you are done with major, stats class of some kind. How early would they face this? They can get by without it for a bit. Put into sequence about sophomore year. Lots of transfer students. Lots of sequence issues. Cannot expect students to follow sequence. Can do ok until methods.

PSU-Can take stats right before class.

Many students take course as late as possible.

Seems strange that math makes requirements (like 243) without more input from disciplines.

Portland has 243,244 (broken up). UO thinks of what is in 244 as what should be in 243. When someone comes in with 243, they are still missing core of statistics. They get gen ed math unless they come in with 244.

PSU-Have hard time of regression analysis and data analysis.

Clackamas-60/65/95 aren't preparing students to be successful in any of these disciplines.

95 has been a gateway course (legally) for a long time. Can see the re-engineering course to meet the 95 requirement. IF not 95, (98) then freer to think about what is needed.

How does a different pathway address the needs of a different discipline? All disciplines should have some of the same needs.

PSU has business/non-business stats

243-but discipline sampling? Would it be a detriment if there was something like business questions.

OIT-What students don't bring from math stats is being able to apply and retain it. I don't like word problems. Do I need to do this? Another way of saying I don't know how to do this.

Students can't look at the world and translate it to the math (mathematical modeling).

Strip down so we can do the math then expand out then expand.

Are there prerequisite? If so how do they help learning.

There are requirements but students can't take away the learning with them.

Problem: We compartmentalize things like doing word problems instead of doing all along.

Content Summary:

Looking at content summary through sociology lens:

- How to use a spreadsheet not on content summary.
- Why do we teach them to rationalize? Only useful in calculus (and maybe only on one thing).
- Types of functions useful.
- Would want Calculus for grad students?
- MA 111-Average rate of change.
- Maximization problems (graphically or numerically)-Kelly. Does this in MA 95 at Clackamas now. Only in terms of quadratics.
- OIT-Need most of math 60, calculate square root, understand linear function. If they could get there, then that would work for most students except those going on to grad education.
- A lot of students at the undergrad are math phobic.
- Maybe a course that would get rid of math phobia. 98 and 105 can change perspective. They may be able to do math=get rid of math fear. 20 and 60 really important. Linear discussions to ratios/proportions/basic algebra (students need understanding)
- Linear functions math 60 then don't do it for 3 terms and students don't remember.

Specific examples:

OIT-methods. Thirteen years ago, expected students to know this and now view as job to teach the skills in methods,etc.

Naming letters-changing to greek letters, etc. students don't get.

Q.Does success seem to require calculus?

- It depends on level (graduate students versus undergraduate)
- Difficult part is that choices limited by SES and other factors-limits trajectory
- Math sequence, 60,95,111 only limited amount are going to do math

- 60 and 95 doesn't serve most students (Kelly)
- IS there something good for 95 and 111 for life skills?
- Discipline to succeed in 95 might transfer to 111
- Mike-math good at generic problem solving/exercising your brain cop out. Can you do that and do something meaningful?
- Math 98-can't get through to you but put it in practice to convince people it is a good thing.

Q. Would a math requirement with a course with a stats emphasis be as useful in your field as one with a calc one?

- Might have had course before but don't retain the information.
- Mean, average, difference makes a lot of sense.
- So much stuff in math to cover only basics. 10 pounds of math in a 5 pound bag
- IF students could start getting more sampling distributions and inferential statistics and lead the way from differential in 243 that would help.
- Has anyone thought of making 243 a co-requisite instead of prerequisite
- 243-mean, mode, standard deviation then progress to probability, bar graphs, conditional probability feeds into inferential. Measures of dispersion, central tendency in there. All the textbooks follow kind of trajectory.
- Do they need 243 before stats class (OIT)? If they repeat, less likely to show up and come during office hours, then repetition of course not good.
- Needs to be different enough. Something sort of soaks in, then come to 3 years later then it may make sense (repetition).
- Make students "teach it." How do we do that?
- Difference between doing procedures and explaining how to do it.
- Could we undo 243 prereq? Could something else be enough?
- Could be corequisite-methods and stats
- Conversation OIT needs to have different from conversation here.
- If students did come with content in content summary, would be good but they don't actually come in with the skills.

Imagine student entering undergrad social stats, methods course. What in content summary should they have?

- Math 60-Basic stats and scientific notation, ratio, and proportion-20 topic, not 60
- 211 content varies across campuses.
- After math 60, what do students need? Can live without most of what is in 65 for Sociology unless bound for grad school.
- Math 65-C, E, and F useful (be able to rationalize). Know that negative sign outside means something than when inside. B would never come up.

- Need to rationalize (square root ends up on bottom and they are lost). Inverse relationship squaring and square root.
- Graph line with linear slope. Understand slope and how represented in graph.

Math 95

- Understand absolute value (how far is deviated)? Magnitude of difference.
- 1b and 1c-not had students to solve absolute value in inequality situation.
- Not using item 2
- #3-Not functions but function notation
- Need #4 and would be great if they could do #5a,b, and c
- Need #6 (basic arithmetic implied) Factors versus terms for simplifying algebraic expressions.
- Will be ok without knowing #7 but would be great if they had as foundation.
- Number 8 more for graduate level.
- 111 gets into function transformation
- Do not need number 9; given parabola not line. Would be helpful if something like-tell me what the predictive value of variable would be given that someone has 7 years of schooling.

Need to be able to look at graphs and understand slopes and intercepts.

MA 111

- Plugging inputs into an expression (not necessarily with function notation)
- Some of foundational skills
- Definitely not number 3
- 4 and 5 would be nice if they knew but probably wouldn't happen with undergrad students.
- Do not need number 6
- Do not need number 7
- Do not need number 8
- Do not need number 9
- Do not need number 10
- Do not need number 11
- Do not need number 12
- Do not need number 13

MA 243

- #1-Need to know probability facet but not notation
- Need#2b
- Need 3 and beyond

