

Mathematics Dispositions and Ethnicity: Evidence from Secondary Education

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(with the Teleprism team)

TeLePriSM

Teaching and Learning Practices in Secondary Mathematics

ESRC funded study (RES-061-25-0538) in UK (2011-2014)
(www.teleprism.com)

"Mathematics teaching and learning in secondary schools: the impact of pedagogical practices on important learning outcomes"

TEAM

Project investigator

Research Associates

Associate Research students

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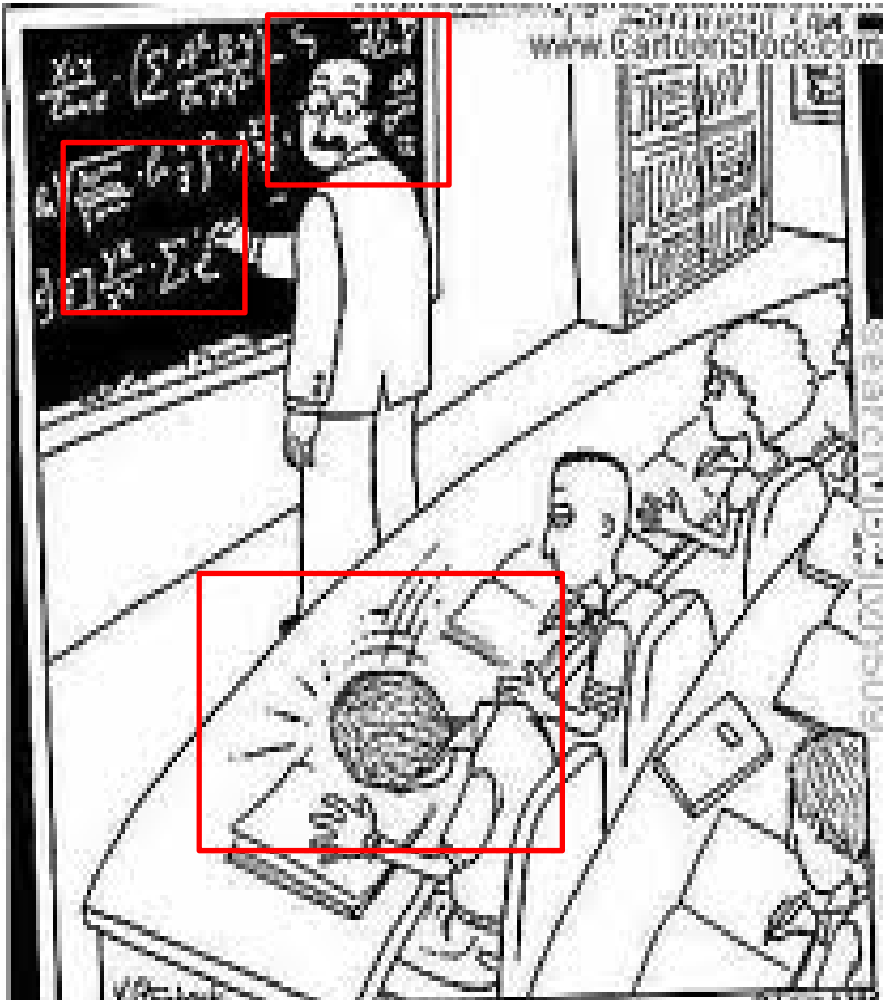
Sophina Qasim, David Swanson, Patricio Troncoso-Ruiz

Prof Julian Williams, Prof Ian Plewis

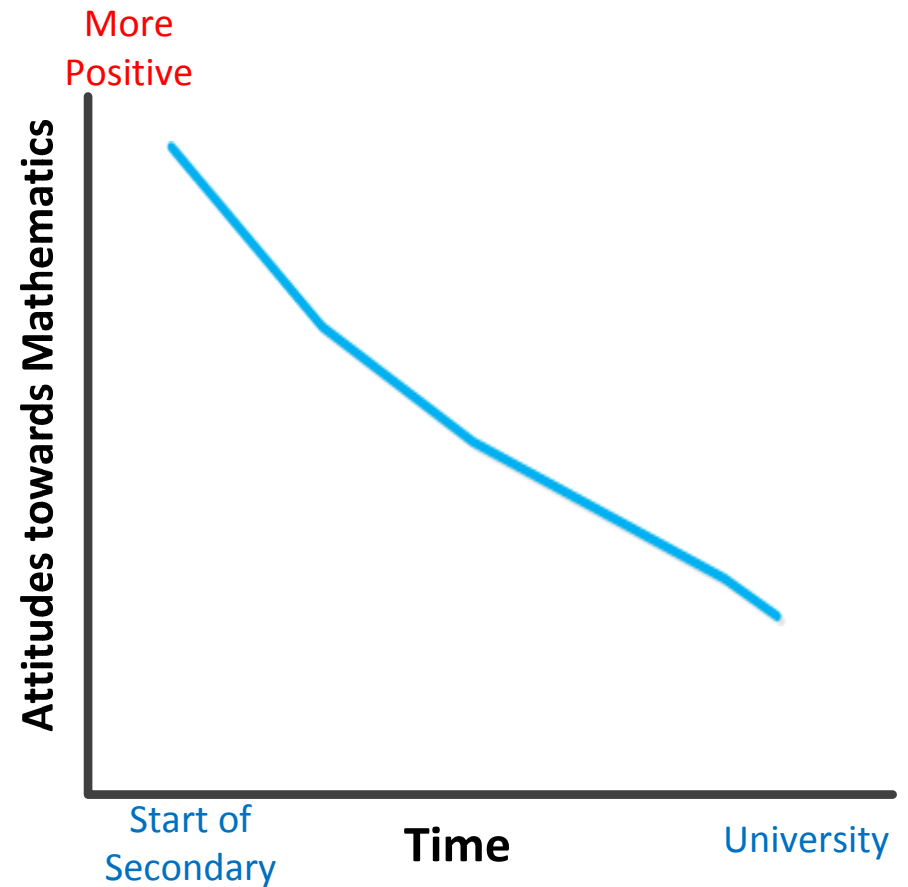
The problem...

Declining students' mathematics dispositions/attitudes

The main actors



Recent evidence ...



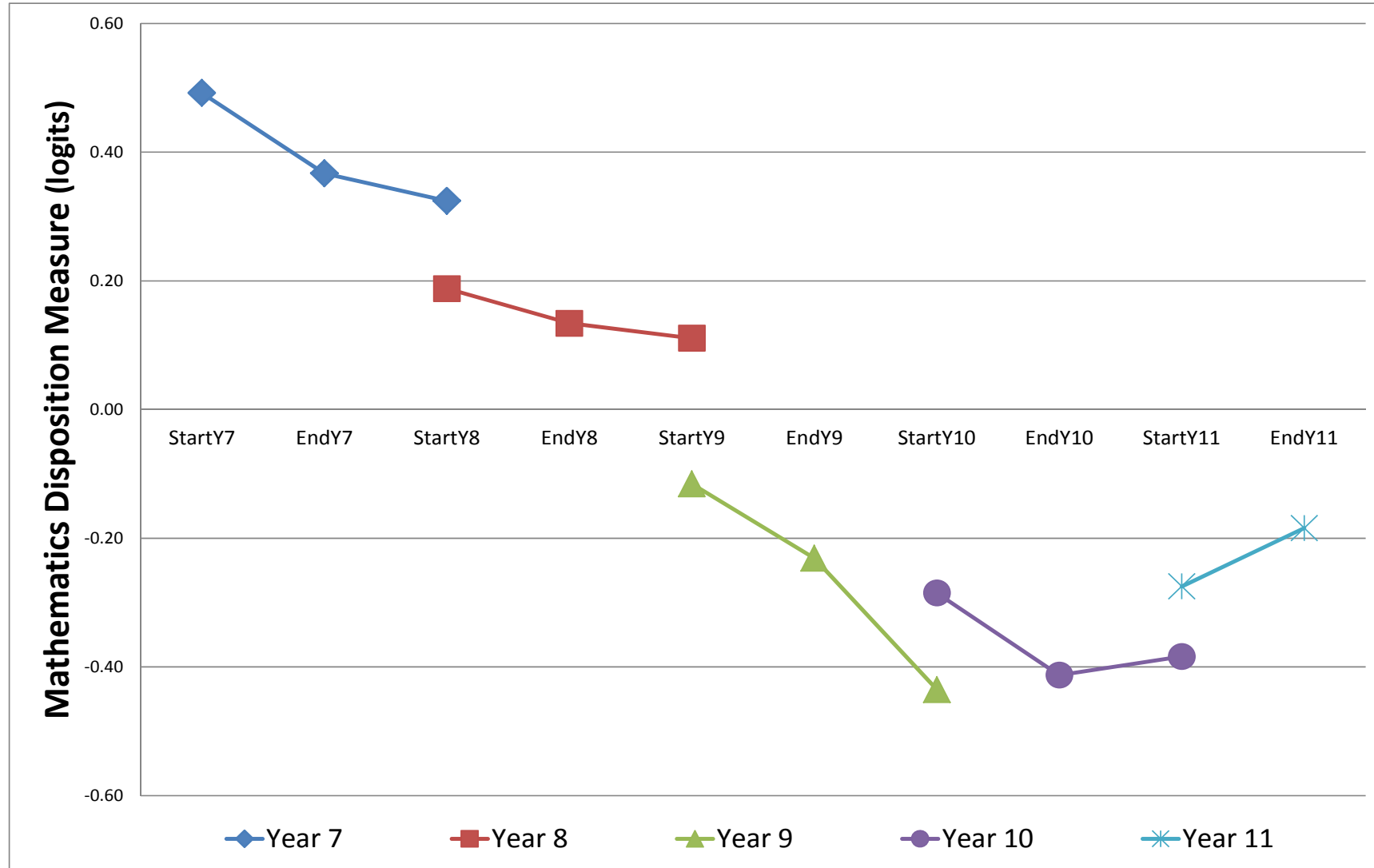
TeLePriSM: Aims

Overall Aim: To map secondary students' learning outcomes and choices, including dispositions and attitudes, together with the teaching they are exposed to.

- Surveys for students from Years 7 to 11 (3 times) and also for their mathematics teacher (twice).
- Case studies in a small number of schools with lesson observations and interviews with students and teachers.

Focus of this briefing: Students (maths) dispositions in one academic year, in relation to ethnicity

Mean Maths disposition, by Year group cohort



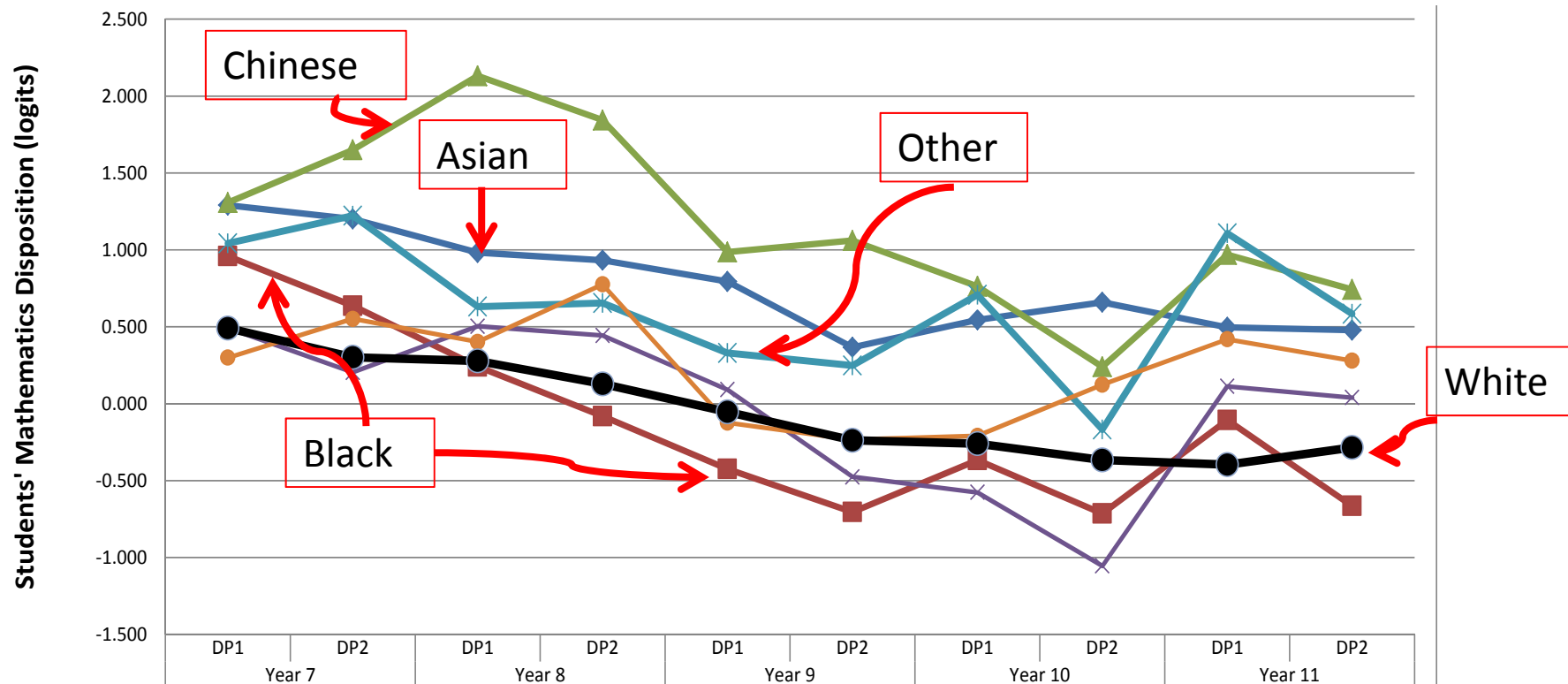
Sample

- N~7500 (at DP1)

Ethnicity	DP1	DP2	DP3
White	5945	4762	3475
Asian	743	595	431
Black	133	110	94
Chinese	67	60	32
Mixed	253	216	164
Other	84	69	55
Other White	156	128	95
Refused	20	19	14
Information Not Yet Obtained	96	92	92
School not provided Information	6147	2658	3585
Grand Total	13644	8709	8037



Mathematics Disposition

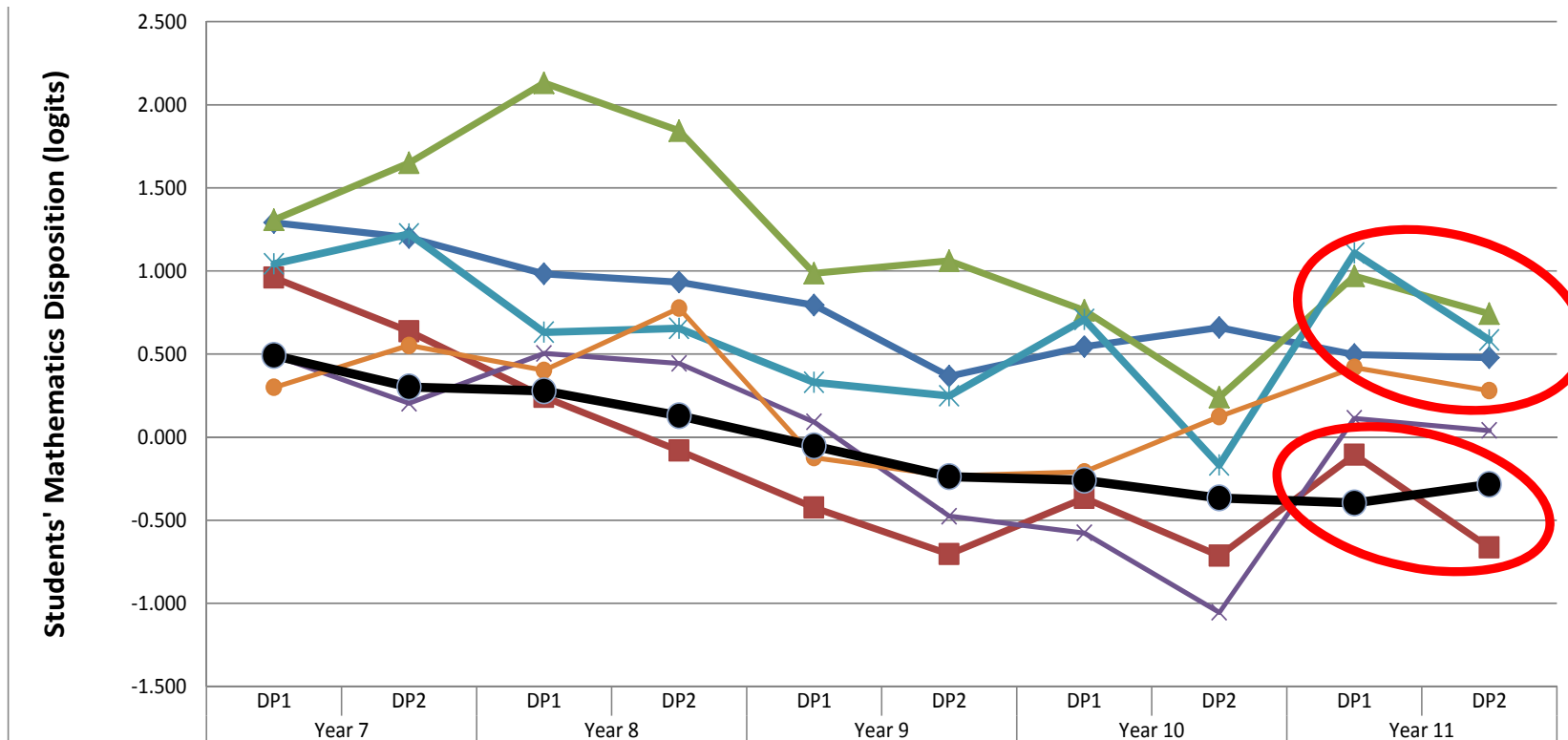


From Year 7 to 10: Overall decline

- Asian, Chinese and Other consistently higher than White
- Black significantly lower than Asian

More intense decline (Year 7 higher than White, then reverse)

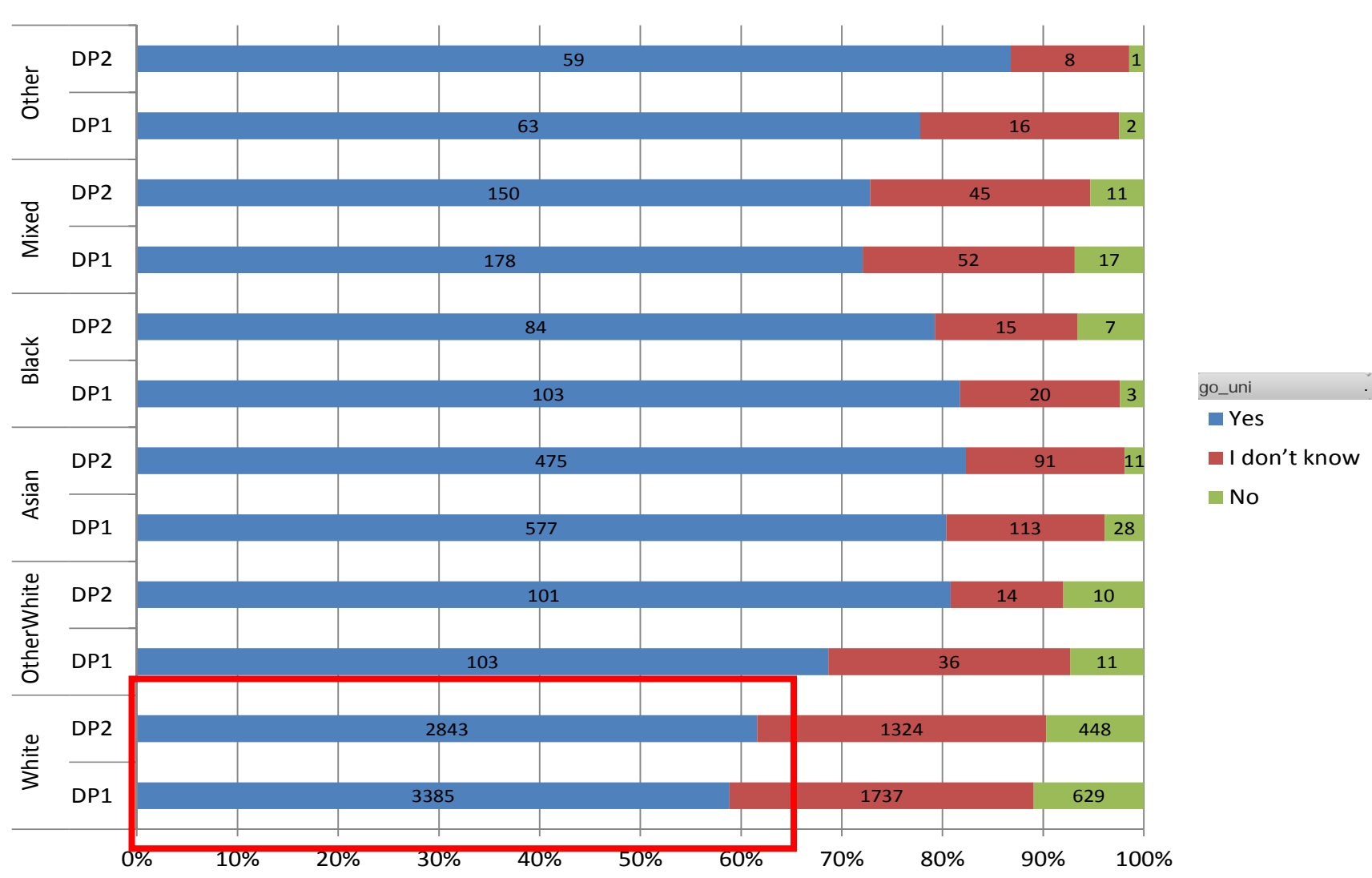
Mathematics Disposition



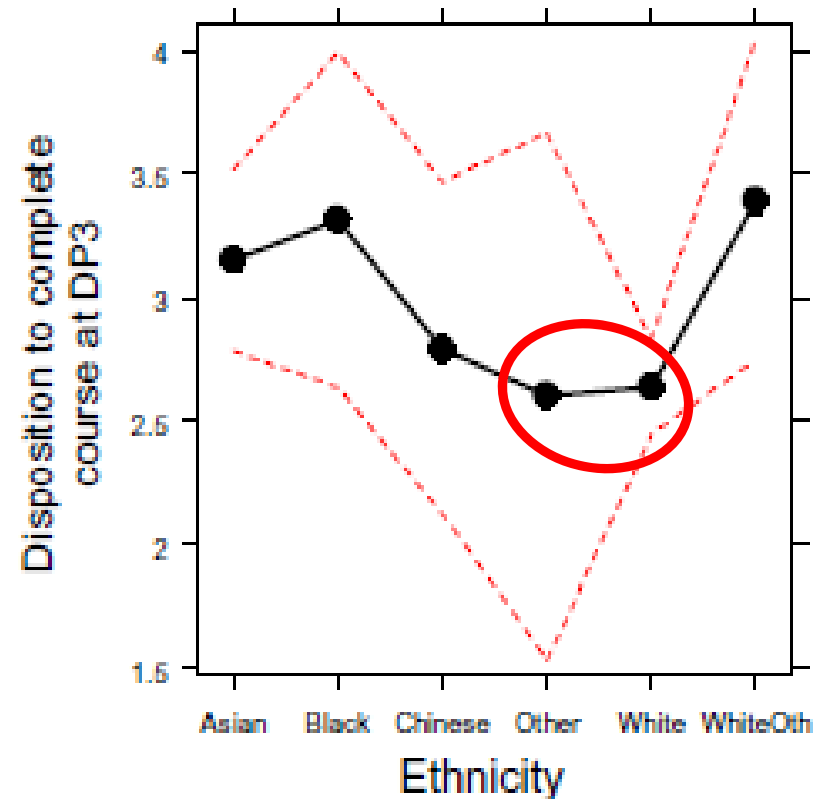
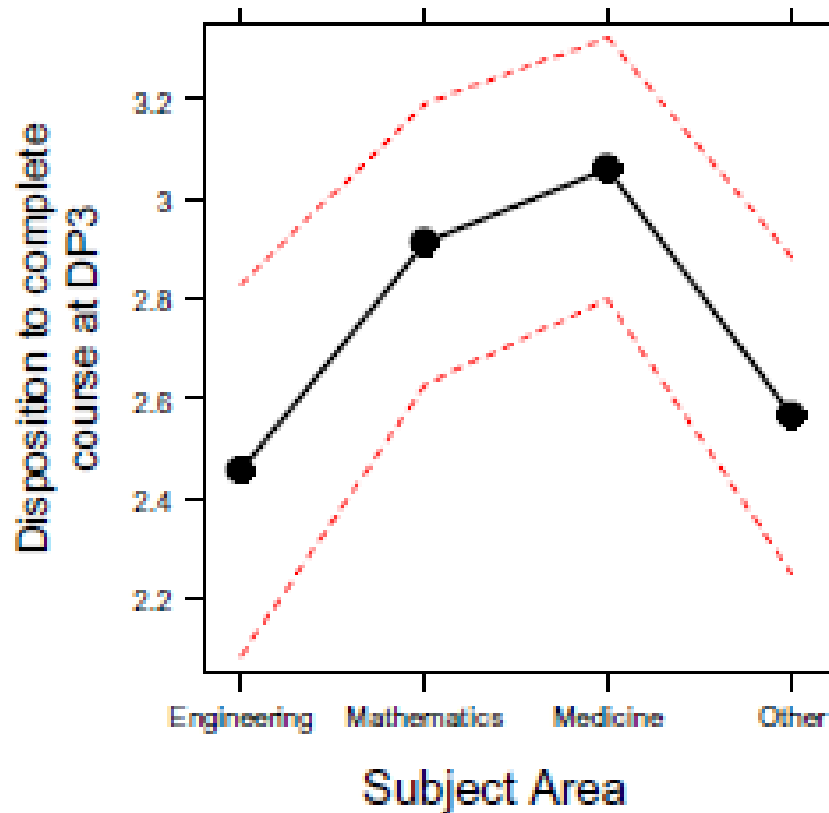
Change during Year 11:

- Asian, Other and Other white more disposed compare to White
- Black less disposed compared to Asian

Intention to go to University



Disposition to complete university course



Results from an earlier study on students transition to University

More information

- www.teleprism.com
- www.transmaths.org

Thank you!