Description of QuaRCS Variables

Variable Name	Description
Identifier	anonymous identifier (replaces student names)
Semester_Year	semester and year that the QuaRCS was administered
Completed_ALL_PRE	binary variable describing whether all quantitative questions were completed (always 1 for this dataset)
Duplicates_PRE	variable describing whether a student completed the assessment more than once
PRE_STARTDATE, PRE_ENDDATE	Date/time instrument was started and finished
PRE_TIME	elapsed time between startdate and enddate
PRE_SCHOOL	Code corresponding to school where instrument was administered
PRE_DIFF, PRE_DIFF_REV	Perceived difficulty of the assessment 1= very easy 2 = easy 3 = moderate 4 = difficult 5 = very difficult
PRE_FREQEN	Perceived frequency of encounters with similar situations in daily life 1 = almost never 2 = about once per year 3 = about once per month 4 = about once per week 5 = daily
PRE_CALC	Estimate of how much used calculator 1 = all or almost all of the questions 2 = ~ 75% 3 = ~50% 4 = ~25% 5 = none, or only 1-2
PRE_DAILYM, PRE_DAILYG	Perceived frequency of encounters with math/graphs in daily life 1 = never 2 = infrequently 3 = sometimes 4 = frequently
PRE_ATT_1, PRE_ATT_2, PRE_ATT_3, PRE_ATT_4	Students place math on a 4 point scale between two opposite adjectives (1= positive adjective, 4 = negative adjective) 1= interesting to boring 2 = useful to useless 3 = east to hard 4 = fun to scary
PRE_LK1, PRE_LK2, PRE_LK3, PRE_LK4, PRE_LK5	Likert scale level of agreement with statements where 1 = strongly agree, 2 = agree, 3 = disagree and 4=strongly disagree LK1 = I feel confident using numbers in my non-math courses LK2 = I feel confident using numbers in my daily life LK3 = Numerical skills are important to the understanding of science LK4 = Numerical skills are important in my daily life LK5 = I am satisfied with my current level of numerical skill
PRE_PREVMT	Most recent math course 1 = taking one now 2 = within the last year 3 = within 2 years 4 = within 3 years 5 = >3yr ago
PRE_MOREMT, PRE_MO	How many more math/science courses in college

RESC	
PRE_WHYCS_1-7	Why did the student take this course? 1=It is a prerequisite for courses in my major 2= To fulfill a university general education requirement 3= It sounded interesting 4= It sounded easy 5= I heard the class was good 6= I heard the instructor was good 7= other
PRE_YEAR	What year in college 1 = freshman 2 = sophomore 3 = junior 4 = senior 5 = other
PRE_MAJOR_...	A series of binary variables for each major choice. HUM = humanities ARTS = arts SOCSCI = social sciences EDU = education SCI = science EMC = engineering, math or computer science BUS = Business-related HEALTH = health-related TRADE = trade-specific JOUR = journalism GEN = general studies UND = undecided OTHER = other
PRE_WHYMAJ#	A series of binary variables indicating whether (1) or not (0) students selected each of the following reasons for choosing their major 1 = I like the subject 2 = I feel that it will help me get a job that I will enjoy after graduation 3 = I feel that it will help me get a well-paying job after graduation 4 = I am good at it 5 = I chose a major that would avoid math as much as possible 6 = I chose a major that would avoid writing as much as possible 7 = I'm not sure yet 8 = Other
PRE_AGE	Student age 1 = under 18 (removed from this sample) 2 = 18-25 3 = 26-35 4 = 36-45 5 = 46-55 6 = 56+
PRE_GENDER	Student gender 1 = male 2 = female 3 = other

PRE_RACE_...	A series of binary variables indicating whether (1) or not (0) a student selected each race AA = African American AS = Asian or Pacific Islander CAUC = Caucasian (non-hispanic) HIS = Hispanic or Latino NA = Native American OTHER = other PNTS = prefer not to specify
PRE_DIS_...	A series of binary variables indicating whether (1) or not (0) a student selected a disability PHYS = physical disability COG = cognitive disability LEARN = learning disability PNTS = prefer not to specify
PRE_HSUS, PRE_ELEM_WHERE, PRE_MIDDLE_WHERE, PRE_HS_WHERE	A binary variable indicating whether (1) or not (0) students K12 education was done abroad, and text variables indicating where for elementary (ELEM), middle (MIDDLE) and high school (HS)
PRE_EFFORT	Student self-assessment of how hard they tried on the instrument 1 = I just clicked through and chose randomly to get credit 2 = I didn't try very hard 3 = I tried for a while and then got bored 4 = I tried pretty hard 5 = I tried my best on all or most of the questions
PRE_SCORE	Score on the assessment (sum of PRE_Q##_scored)
PRE_compete_total_percent	Percentage of questions completed
PRE_CF_total	Sum of all confidence rankings
PRE_CF_mean	Mean confidence ranking
PRE_AGE_NEW	Rebinned ages with all >35 collapsed into one
FAC1_1	A composite variable predicting students' numerical self-efficacy
FAC1_2	A composite variable predicting students' perception of numerical relevancy
FAC1_3	A composite variable predicting students' academic maturity
ZPR_1	A model variable predicting student score on the assessment from the three variables above
ZRE_1	The differences between predicted score (variable above) and actual score
STEM_MAJOR	A binary variable indicating whether (1) or not (0) a student is a STEM major