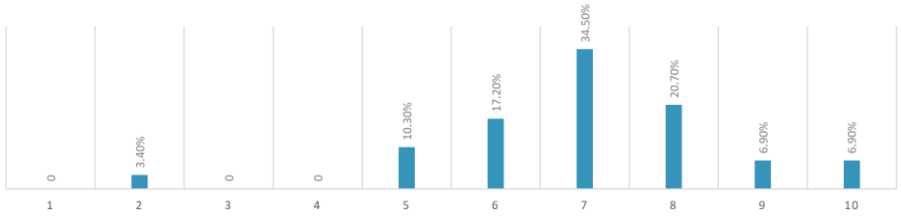
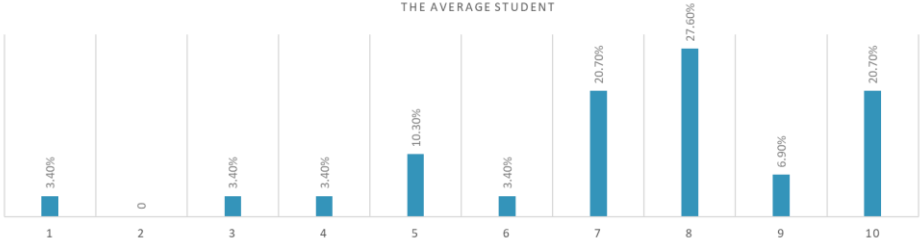
Do Students of a Higher Academic Standard Tackle Mathematical Problems in Different Ways?

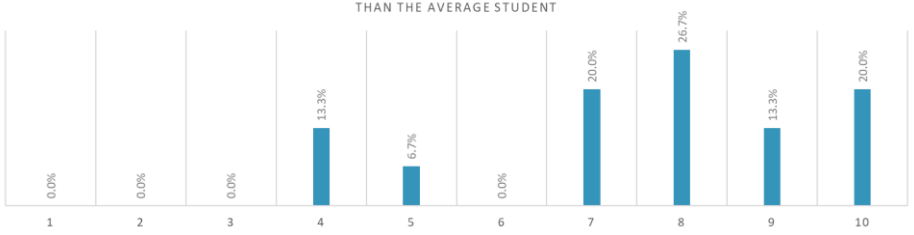
GRAPH TO SHOW ON A SCALE OF 1 – 10, HOW MUCH UK TEACHERS OF DIFFERENT ACADEMIC YEARS BELIEVE THAT STUDENTS OF HIGHER ACADEMIC STANDARD PARTICIPATE MORE IN LESSONS THAN THOSE WORKING AT THE NATIONAL AVERAGE.



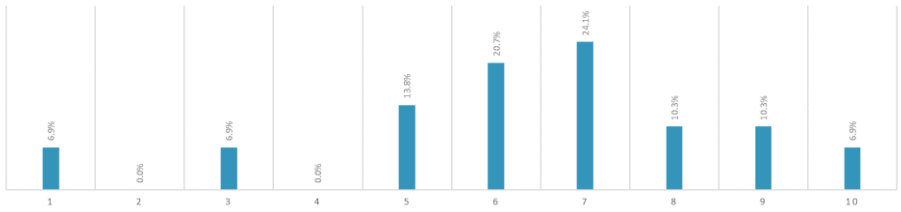
GRAPH TO SHOW ON A SCALE OF 1 – 10, HOW MUCH UK TEACHERS OF DIFFERENT ACADEMIC YEARS BELIEVE WHETHER STUDENTS OF HIGHER ACADEMIC STANDARD TACKLE MATHEMATICAL PROBLEMS IN MORE WAYS THAN THE AVERAGE STUDENT



GRAPH TO SHOW ON A SCALE OF 1 – 10, HOW UK STUDENTS OF A HIGHER ACADEMIC STANDARD, IN DIFFERENT ACADEMIC YEARS, BELIEVE WHETHER THEY TACKLE MATHEMATICAL PROBLEMS IN MORE WAYS THAN THE AVERAGE STUDENT



GRAPH TO SHOW ON A SCALE OF 1 – 10, HOW MUCH UK TEACHERS OF DIFFERENT ACADEMIC YEARS BELIEVE WHETHER STUDENTS OF HIGHER ACADEMIC STANDARD FEAR BEING INCORRECT MORE THAN LEARNING FROM THEIR MISTAKES.



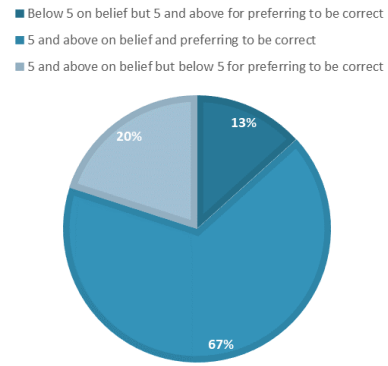
All data, graphs and comments referenced were collated and created from surveys conducted by Holly Evans.

Students across the world undertake studies in different ways, with mathematics being a subject that the vast majority will be assessed in at some point in their academic careers.

Upon working with a year 6 mixed ability class, as well as teaching a small group of year 6 students working above the national average, the outlook higher; academically talented students have when tackling mathematics and mathematics based subjects can be discussed. This was done by completing a total of 27 hours of placement at a primary school in Leeds, attending weekly on Wednesday mornings. Throughout each week, the advanced group of year 6's would be taken out for half an hour to complete worksheets and exam questions of increasing difficulty.

Alongside this, in order to have a larger sample range than just one specific school community, two surveys were created. One survey was completed by teachers at the school and other UK teachers of both primary and secondary schools, the other was completed by higher achieving UK students ranging from Year 10 – Third Year University. Although the primary students did not partake in this survey, they were observed and questioned throughout the placement on the topics brought up.

COMPARISON BETWEEN THE BELIEF OF BEING NATURALLY SMART AT MATHEMATICS AND PREFERRING TO BE CORRECT THAN TO LEARN FROM MISTAKES.



Above average students care more about being correct than learning from mistakes.

Embarrassment is a key reason for lack of participation in higher achieving students.

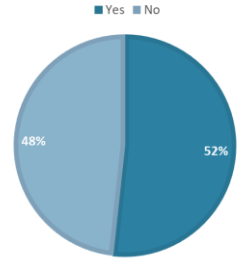
Boredom is a common reason for a lack of participation in above average students.

Stress surrounding upcoming exams is caused by internal and external factors.

Increased difficulty in work leads to more group work and less stress within advanced students.

Further research:
Do students of Different Genders View Mathematics Differently?

CHART TO SHOW THE BELIEF OF UK TEACHERS ON WHETHER THERE IS AN EQUAL NUMBER OF HIGHLY ACADEMIC MALES AND FEMALES IN THEIR CLASSES



Comments from students regarding the gender split within mathematical classes:

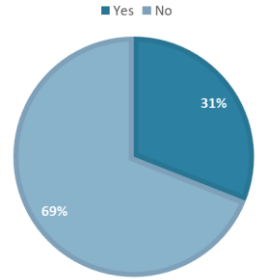
"more males than females"

"there were [only] 3 girls"

"always more girls than boys"

"more girls"

STUDENTS OF AN ADVANCED MATHEMATICAL CLASS, IN DIFFERENT ACADEMIC YEARS, BELIEVE WHETHER THE CLASSES THEY WERE IN HAD EQUAL MALES TO FEMALES



Females are more likely to worry about being correct than males.

Contradictory to research, females were more disruptive than males.

Only females in the observed mathematics support group.

62.5% of students in advanced mathematics group were females, contradicting stereotype.

Females have less confidence in mathematics than males.

Holly Evans