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# MATHS-WHIZZ PERFORMANCE ANALYSIS

Based on GloSS and e-asTTle data from Pt England School

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# MATHS-WHIZZ PERFORMANCE ANALYSIS

Maths-Whizz was used at Pt England across Years 5-8 in 2013. We have analysed the data from February – November 2013. Results clearly show that students using Maths-Whizz as part of their numeracy programme for 60 minutes or more per week accelerate their learning over fellow students in their overall improvement in Maths-Whizz Maths Age, e-asTTle and GloSS.

## Maths Age

Just under 10% of the overall sample used Maths-Whizz for more than 60 minutes per week (best practice suggests that accelerated learning will happen when Whizz is used as an integrated part of a student's numeracy programme, for between 60 and 90 minutes per week). These students showed accelerated growth in their maths age, improving at a rate faster than their corresponding chronological improvement. This is even more significant when an analysis of the Maths-Whizz initial assessment data showed that this group (students who used Whizz for more than 60 minutes per week), started the year with their Maths-Whizz Maths Age over 2 years lower than their chronological age and are now showing, possibly for the first time in their schooling, that their maths age improvement is at least keeping up with their chronological age increase and in many cases closing the gap between Math Age and Chronological Age.



Other world-wide studies have shown that students averaging 90 minutes per week will result in accelerated learning of between 2 and 2.5 times the corresponding chronological increase for each student



### GloSS Improvement at Pt England School

#### Add/Sub

In Add/Sub there appeared to be greater improvement in the students who used Whizz for more than 30 minutes per week. While Whizz is clearly making a difference between the low users and moderate users, the lack of difference between the moderate users (30-60 minute group) and the high Whizz users (>60 min) could be indicative of effective teaching in the school in the area of Addition and Subtraction.

In other strands there was a noticeable relationship between Maths Whizz Usage and improvement in GloSS stages.

#### Mult/Div

Students using Maths Whizz for more than 30 minutes per week were improving in their GloSS stages at a faster rate than those using Whizz for less than 30 minutes, with even greater improvement for the high users.

#### Prop/Ratio

Students using Maths Whizz for more than 30 minutes per week were improving in their GloSS stages at a faster rate than those using Whizz for less than 30 minutes. There was also a corresponding increase in GloSS performance and progress for the students using Whizz for more than 60 minutes per week.

## GloSS Improvement cont ...

What may be of interest is further analysis by Syndicate/Year Level. For example this is the same analysis done just looking at the Year 7/8 cohort.



#### e-asTTle Improvement



Trends of accelerated learning were reflected in the e-asTTle analysis where students using Whizz for more than 60 minutes per week were improving faster than the moderate users and at nearly twice the rate of the low users across all strands. The only slight anomaly was in Algebra where although moderate and high users were progressing faster than low users, there was a drop from the moderate cohort to the top cohort. Once again worth noting is the sample of high users is relatively low in size compared to the overall population so some variance is to be expected due to this.

## Conclusion

Extensive data analysis shows a strong correlation between Maths Whizz usage and Maths-Whizz Maths Age increases. These trends are reflected in Pt England data with users average more than 60 minutes per week showing accelerated improvement in their mathematics ability.

When overlaying Whizz usage with GloSS achievement data, those using Whizz for more than 30 minutes per week showed significant gains as compared to students who used Whizz infrequently.

When overlaying Whizz usage with e-asTTle achievement data, those using Whizz for more than 30 minutes per week showed significant gains as compared to students who used Whizz infrequently. This trend was stronger again for students using Whizz for more than 60 minutes per week in all but one strand.

Overall, students with even a basic level of usage in Maths Whizz outperforming the rest of the sample group in GloSS and e-asTTle assessments. For these students using Whizz for the recommended 60 - 90 minutes per week, their progress was even greater when compared to the rest of the sample group.