

Numberella Data Trial

Gayhurst School

March – June 2021



Gayhurst School
Bull Lane
Gerrards Cross
Bucks
SL9 8RJ
U.K.

‘Data wise 100% improved their PTM score from 2020 to 2021.
Some have improved significantly. Average improvement was more than twice
that of the control group.’

Grant Whitaker, former Director of Studies and Head of Mathematics at Gayhurst School

Pupils Improving Score: 100%
Maximum Improvement: 25%
Numberella Club Average Improvement: 14.6%
Control Group Average Improvement: 6.9%

Trial Summary

Between March and June 2021, ten 6 -7 year old pupils working towards the end of Key Stage 1 level, took part in a weekly Numberella Club activity. These pupils, along with the others in their cohort, were assessed before and after the activities commenced. The results of National Tests (Progress Test in Maths by GL Assessment) taken after playing Numberella for 11 weeks showed a marked improvement by those that had played the game over those pupils in the year group who hadn't. Whereas the first group scored an average of 6.9% improvement, the pupils who had played Numberella regularly scored an average of 14.6% improvement.

Explanation Of the Progress Test in Maths Scoring Levels

The Tests provided by GL Assessment are nationally standardised with a score of 100 being the national average. However, an average score of 110 is expected of pupils attending an independent school. A score of 141 is the maximum achievable.

Responsible For the Trial

Grant Whitaker is the former Director of Studies and Head of Mathematics at Gayhurst School and was responsible for overseeing the trial. The administration of the Progress Tests was undertaken by the two class teachers of the year group.


Conclusion

The facts speak for themselves – 100% of the pupils improved their PTM score after playing Numberella for an 11 week period. These ten pupils achieved an average percentage improvement of 14.6%. In contrast, the other pupils in the cohort achieved an average percentage improvement of only 6.9%. Numberella is designed to improve take up of mathematical information due to enhanced numerical fluency. This would appear to be the case.

The stand out individual result from the trial was that one pupil who had scored just over the national average in 2020 recorded a 25% improvement in 2021 with a score one point short of the maximum obtainable. Two other pupils scored in excess of a 20% improvement. Another pupil, scoring below the national average in 2020, achieved a 16% improvement, boosting their result to 114. The potential of Numberella to reach pupils at the bottom of the attainment scale is thus demonstrated, as is the fact that in a Numberella environment, no pupil is out of reach.

It's also clear that the rules are not too complicated for children to understand. The lowest achieving pupils in this school 'caught onto it all quickly.'

The Gayhurst School trial was a resounding success. All elements of the game – accessibility and educational relevance – have been clearly demonstrated. Parents of pupils who took part in the trial have insisted the Club is made available in future terms to ensure their children continue their Numberella journey and continue to foster their love of the subject through playing the game.



Grant Whitaker
Former Head Of Maths and Director Of Studies at Gayhurst School

Progress Tests in Mathematics (PTM) from GL Assessment

Pupils from Control Group	Test 1 (Summer 2020)	Test 2 (Summer 2021)	Percentage Improvement
Pupil 1	115	122	6
Pupil 2	88	90	2
Pupil 3	125	140	12
Pupil 4	107	119	11
Pupil 5	125	114	-7
Pupil 6	119	121	2
Pupil 7	105	99	-6
Pupil 8	93	103	11
Pupil 9	120	137	14
Pupil 10	135	141	4
Pupil 11	124	131	6
Pupil 12	98	119	21
Pupil 13	94	96	2
Pupil 14	119	141	18
Pupil 15	125	128	2
Pupil 16	93	107	15
Pupil 17	109	120	10
Pupil 18	84	80	-4
Pupil 19	101	121	20
Pupil 20	124	123	-1
		Average Percentage Improvement	6.9

Pupils from Numberella Club	Test 1 (Summer 2020)	Test 2 (Summer 2021)	Percentage Improvement
Pupil 1	110	121	10
Pupil 2	112	140	25
Pupil 3	100	124	24
Pupil 4	118	130	10
Pupil 5	109	132	21
Pupil 6	117	128	9

Pupil 7	101	116	15
Pupil 8	113	127	12
Pupil 9	98	114	16
Pupil 10	115	120	4
		Average Percentage Improvement	14.6