Harold's Cross N.S.

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School Self-Evaluation Report

Cycle 2 of

School Improvement Planning in the Subject Area of

Numeracy

(April 2021)

School Self- Evaluation Report: Numeracy

1. The focus of the evaluation

A school self-evaluation of teaching and learning in the area of Numeracy took place in Jan -April 2021 at the end of the first 3 year cycle (2018-21). The following is the report on the findings of the evaluation.

2. School Context

Harold's Cross NS is a vertical, co-educational national school with DEIS Band 2 status. The school was a developing school for the last decade and now has 2 of each class level. Pupil enrolment currently stands at 409 with 16 mainstream classes, a SEN team of eight staff and five SNAs. The school serves the surrounding parishes of Harold's Cross, Mt. Argus, Kimmage and Crumlin. The school also has a Montessori managed by the Board of Management, a very active PTA and a Home School Community Liaison teacher.

3. The findings:

Teacher Feedback:

A numeracy team of 12 staff members evaluated the school's current performance in Numeracy using the Teaching and Learning domains from Looking at Our Schools (2016). Areas of strength were noted in green and areas for development were noted in red (see **appendix 1**).

In general, the team felt that maths is taught very well in the school and that teachers are motivated to ensure that lessons are engaging and relevant. Lessons are differentiated to cater for different abilities and there are a number of whole school initiatives (power hour, withdrawal of resources groups, in class support teaching and acceleration of exceptionally able pupils to higher classes) which allow for differentiation. Pupils are motivated, enjoy maths activities and participate well in individual and group activities. There is a good culture of collaboration and group work that is used across the curriculum in the school and is also evident in maths lessons. Staff are definitely motivated to collaborate and that there is a lot of informal collaboration and sharing of ideas and resources but due to the constraints of the current COVID situation and the time constraints of the school day there is little opportunity for formal collaboration time in maths. There is an awareness of the targets in the whole school plan in maths and teachers are engaging in CPD in maths in their own time, sourcing CPD themselves in areas they wish to develop. Each teacher is recording their own formative and summative assessments in a manner that is most conducive to their teaching.

Pupils make good progress through the objectives of the curriculum each year however it was noted that due to the COVID-19 lockdowns in 2019-20 and 2020-21 we would anticipate a fall in the school standardised assessment results in May 2021 as teaching maths remotely was not as effective as teaching in school. It was felt there is a group of children in most classes, who currently do not receive additional support in maths, that are now struggling to keep up with the curriculum expectations at their class level following the two school closures.

Teachers also highlighted the need to develop pupils' ability to apply their mathematical knowledge in different contexts and areas beyond maths. Pupils need to develop confidence in contributing their opinions and experiences to class discussions and understand the value of making mistakes and using them as learning opportunities. Developing pupils' skills in reporting, presenting and explaining the process and purpose of maths tasks and their ability to assess their progress and their strengths and areas for improvement themselves will be an area of focus going forward. A focus should also be placed on

teaching the key skills underpinning the maths curriculum and ensuring pupils can identify these skills, connect them to their learning in other subjects and how they will be important in lifelong learning and career opportunities in the future.

The whole school approach of tracker pupils in the place value strand was raised and whether it is actually beneficial to the teaching and learning of maths was debated.

Pupil Feedback:

A questionnaire was drawn up by the Numeracy team and given to 4 classes (2nd, 4th, 5th, 6th) and a focus group was carried out with senior infants pupils in March 2021 (see appendix **2** and **3**).

In the focus group the majority of pupils said they liked maths and that they were good at it. Of those who completed the questionnaire 50.9% said they were good at maths and 43.5% responded that they were 'sometimes' good at maths. 88.9% of the pupils said they liked maths or 'sometimes' liked maths. 62% of the focus group would like to spend more time on maths in school while only 34.3% of those who responded to the questionnaire would like to. The areas identified as 'easiest' by the pupils were operations, money and word problems. The areas identified as 'most difficult' were decimals/fractions/ percentages, time and measures. Students showed that they used a range of strategies when approaching maths problems and when they are stuck with their maths homework. They also listed a number of skills developed in maths lessons (e.g. problem solving, column addition, different operations) but mainly listed strands/ strand units and not the skills as identified in the curriculum. They showed a good understanding of the importance of maths in the future and listed a wide range of jobs that require maths skills. 94% of the pupils who responded to the survey said they feel confident or 'sometimes' feel confident giving answers in maths class. 77% said it is okay to make mistakes in maths and 75% said there can be more than one way to complete a maths problem. 44% of pupils responded 'no' to the statement 'there is always one right answer in maths' and 50% responded 'sometimes'. These results do not correlate with the teacher feedback that pupils lack confidence and are worried about making mistakes in maths. Students engage in a range of activities which use maths outside of school.

Parent Feedback:

A parent questionnaire was sent out via Google Forms in March 2021. 138 parents responded (see **appendix 4**). 89.9% of respondents felt their child had a positive attitude towards maths. 84.4% of students are spending between 5 and 20 minutes on their maths homework according to their parents and 70.3% of parents feel their child gets 'the right amount' of maths homework. 22.7% feel that their child gets 'too little' maths homework. 44.1% responded that their child does not usually have a problem completing their maths homework and word problems was the area most parents identified as difficult. Parents selected a range of strategies they use when assisting their child with maths homework the most common being talking through the problem or showing examples of how to complete the sum. Only 1.4% of parents 'often' and 15.9% 'sometimes' use the parent guides on the school website. Over 50% of parents responded that they didn't know the guides were there. Just under 50% of parents feel their child has an understanding of how their learning in maths will affect their future career and life-long learning. Of those parents whose child has engaged in Numeracy Power Hour or Numeracy Learning Support the majority think these initiatives were beneficial to their child's progress in maths (PH 84.1%, LS 75%).

4. Progress made on previously identified targets:

The previous SSE in Numeracy was carried out in 2017-18. Areas for improvement identified at that time were problem-solving, place value and the measures strand, maths facts, differentiation and the development of maths vocabulary.

- The variety of approaches to differentiation implemented over the last three years is a strength highlighted in the teachers' feedback.
- The whole school approaches to problem solving (RUDE, problem of the day/ week etc.) have worked well but the staff felt that further embedding of the strategies and practices in the next cycle of SSE was needed. In particular focus needs to be placed on students explaining the strategies they used to reach their solution and on encouraging students to explore different methods to solve problems. The use of the Maths Wall in each class has improved students' maths vocabulary but they still need assistance defining vocabulary and using it to explain their thinking during maths tasks. The use of the IZAK-9 cubes in 4th to 6th class was highlighted as a very positive resource for actioning these targets and embedding the use of this resource will be a target going forward.
- Due to the COVID-19 lockdown, the SIGMA-T assessments were not completed in May 2020. There was a 5% improvement in the overall results of the Sigma-T standardised test across the school in May 2019. This was above the target set for 2018-9 year in the SIP plan and above the overall target set for cycle 1 of SSE in Numeracy (2018-2021). In 2018, 74% of children scored above the 51st PR. In 2019, 79% of pupils scored above the 79th PR. There was a particularly sharp rise in the number of pupils scoring in the top band (76th -99th PR) from 39% in 2018 to 59% in 2019.
- The recalling of maths facts is an area that will need continued focus in the next SSE cycle. Those staff with training in Maths Recovery emphasised that the recalling of tables is not considered the best approach for addition and subtraction tables - before learning tables by heart the children should have embedded strategies that lead them to a deeper understanding of the operations. Multiplication and division tables should be learned by heart.

5. Summary of School Self-Evaluation Findings

Identified strengths:

- Pupils' motivation, engagement and enjoyment of learning in numeracy was evident in teacher, pupil and parent feedback.
- Standardised test results have been above the average result and improving year on year over the last number of years. Aside from teaching and learning during the COVID-19 pandemic teachers stated that pupils are achieving the curriculum objectives in the maths curriculum.
- Staff engage in CPD in maths both through the school and in their own time.
- Maths lessons are well planned and teachers ensure activities are relevant and engaging, meeting the objectives of the curriculum and differentiated to allow students to achieve success at their level.
- Teachers are open and willing to collaborate with each other in sharing maths resources, lesson ideas and assessments.
- Maths is a well resourced subject in the school.
- The majority of parents are happy with the level of homework given in maths and support their child's learning in maths at home.

Identified areas for improvement:

- Whole school approaches to problem solving need to be embedded.
- Strategies and approaches to teaching maths facts need to be embedded.
- Further work in the area of explaining mathematical thinking and maths vocabulary need to be prioritised going forward. Develop pupils' skills in reporting, presenting and explaining the process and purpose of maths tasks.
- Teachers stated that pupils need to develop confidence in contributing their opinions and experiences to class discussions and understand the value of making mistakes and using them as learning opportunities. (However the pupils' feedback did not correlate with this.)
- Develop pupils' ability to assess their progress and their strengths and areas for improvement themselves.
- Develop pupils' ability to apply their mathematical knowledge in different contexts and areas beyond maths. Focus should be placed on teaching the key skills underpinning the maths curriculum and ensuring pupils can identify these skills, connect them to their learning in other subjects and how they will be important in lifelong learning and career opportunities in the future.
- Formal planning and collaboration time for staff.

Areas for prioritisation:

The following areas have been prioritized for improvement over the coming three years 2021-2024:

- Explicit teaching of maths skills and integration with other curricular areas/ real life learning/ lifelong learning.
- Self-assessment/ growth mindset - confidence and acceptance of mistakes (an opportunity to learn.)
- Continue with problem-solving and explanation of mathematical thinking.