NCSE PRACTICE-BASED RESEARCH PROGRAMME 2025/26

SCHOOL RESEARCH SUMMARY

School name: Stanhope Secondary School

Practising teacher lead: Niamh Áine O' Neill

Research theme: Maths Anxiety and UDL

Research aim: Examine the impact that Universal Design for Learning has on the student's perspective, opinions, and capacity to take part in maths.

Methods

It was a Mixed Methods approach, collecting both qualitative and Quantitative data. Data was collected through a 5-point Likert questionnaire and a reflection sheet. Each student had a 40-minute class, once a week, where they assessed their learning in the week and completed the surveys and reflections. Each week, the skills we practiced or learnt were designed in line with one of the guidelines from the UDL framework.

There were 3 main participants from our school of 300. The students involved were from other maths classes than my own whose teachers noted their struggle with maths.

Research findings

The research has found that students approached the maths problems in our one-to-one classes more confidently when provided through the lens of UDL. There was an increase in their capacity for learning after they were provided with an environment to address the barriers to the content. An increase in the willingness to try was also seen, and the UDL also cultivated confidence in themselves. While working with the students' teachers, I found that this ability followed into their maths classes, which improved their engagement as a whole.

The research also showed an emotional block to the subject, which was cemented in from an earlier experience with the subject. `Through their surveys and reflections, the one-hour classes allowed students to focus on their learning in a space that promoted emotional growth. The use of UDL regulated the students' emotions, which made them receptive to learning.

My top three findings

1. The anxiety that the students faced towards the maths subject formed before the students entered secondary school. Although an upsetting event can occur at any age, the perceptions of the subject can be most negative if the event happened throughout their formative years. There is a limited ability to engage with logical and new material when there is an emotional barrier imposed on the students. (UDL – engagement).

2. When the students are provided with the scheme of work, or a calendar of chapters, it gives them autonomy to be the leaders of their learning. When anxious, the planning of goals and timelines can provide opportunities for them to regulate and aware of future challenges that can come down the line. This also allows students to plan in advance for tests, again providing them autonomy to know and maybe alter deadlines.

3. Students who suffer from math anxiety will benefit from receiving one-to-one teaching. Resource or Behaviour for Learning classes. The students who present suffering from an emotional barrier also benefit more from being provided with an outlet to develop the skills they need to self-regulate and to address the root of the block, and until this is confronted, the skills and maths that the students can perceive will remain limited.

Impact of my research

I have used the research to help liaise with my subject department and the senior management team to alter the culture of how maths is treated in our school. In my own classroom, I have tried to be more open with my students and plan the classes more openly. Letting them know when tests were taking place was a fear, but it allowed for students to prepare more, and they were more confident in the work they were handing up. I have spread all of my findings with the subject department to ensure that we are working together with the UDL framework and to fight against math anxiety in our school. We have prioritised actions with first years to allow them to prosper in school with a new opinion of the subject. For our 1st years, we are trying to move away from phrasing of “exams, junior cycle, assessment” as this language can continue to promote fear. By using “Quiz or Check-in", it prevents the emotional block from taking over and can promote a more holistic view.

There have been many benefits seen in light of this research. One of the most beneficial has been the creation of an after-school homework club, where students can come to get help in an area that feels safe for them.

Another aspect which alleviates the pressure is how our 5th/6th year students come to help the first years with their homework, and can speak to them about their fears as a peer. In future, I would like to further this research in examining how behaviour for learning can also benefit students suffering from math anxiety.