

## **Supporting Community Learning in Scotland through Becoming a Numeracy Champion: Children, families & feeling good about maths programmes**

### **Project summary**

In 2021-22, National Numeracy worked with the Scottish STEM Ambassador Hub, based at SSERC, to offer 'Becoming a Numeracy Champion: Children, families and feeling good about maths' training to CLD practitioners and STEM Ambassadors in three regions of Scotland. This initiative was funded by Education Scotland's Enhancing Professional Learning in STEM Grants programme.

The training was delivered online, with each of the programmes comprising three 2-hour sessions run weekly over 3 weeks. The programme aimed to equip participants with knowledge to support children to develop positive attitudes towards maths and the understanding to help parents with their own barriers around engaging with maths.

In phase 1, we ran programmes for West Partnership, South West Collaborative, and Forth Valley & West Lothian Collaborative. Two of the programmes ran in November 2021 with the third running in January 2022. Through these programmes, we delivered training to 22 CLD practitioners and 31 STEM Ambassadors as well as a small number of participants from schools.

During the training, participants learnt about topics including the issue of low numeracy in the UK, maths anxiety, and the benefits of parental engagement in children's numeracy learning, and took part in discussion activities around the value of maths in everyday life, and how to encourage a growth mindset, amongst other topics.

The training also gave CLD practitioners and STEM Ambassadors the opportunity to network with each other and find out how to request or offer their services as a STEM Ambassador in a community learning setting. In week 3 of each training cohort, the Scottish STEM Ambassador Hub talked participants through the STEM Ambassador Programme in detail and showed CLD practitioners how to place requests for support from STEM Ambassadors on the Ambassador digital platform.

### **Impacts**

National Numeracy surveyed training participants before they attended the training and again some weeks after they had completed the training. Participants were also asked to fill in a training feedback form at the end of the training programme.

40 participants completed the training feedback form, and 25 participants completed both the baseline and the end survey.

Positive changes were seen across all measures taken from baseline to end, with 15 of the 23 measures showing a statistically significant positive shift. Positive impacts were also recorded in the training feedback forms across all questions asked.

The impact data demonstrates that participants have gained in knowledge and confidence to support STEM/numeracy learning and to inspire learners to engage in maths activities.

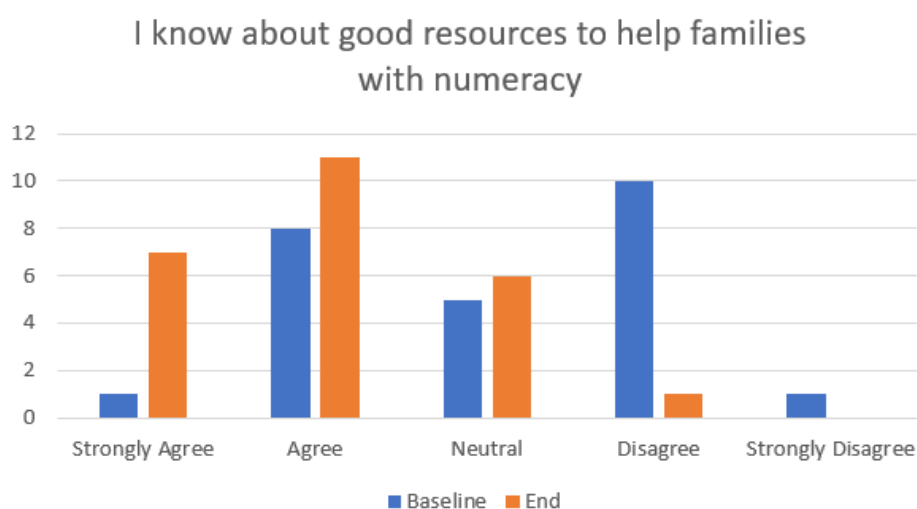
For instance, in the feedback forms:

- 100% of respondents agreed or strongly agreed that as a result of this programme, they feel more able to support children in developing positive attitudes towards numeracy.
- 97% agreed or strongly agreed that as a result of the programme they feel more confident working with adults to help them develop positive attitudes towards numeracy in children.
- 100% agreed or strongly agreed that as a result of the programme they now feel more able to support people with their numeracy.
- 97% agreed or strongly agreed that as a result of the programme, they feel more able to plan practical next steps to improve the way they support numeracy for children and families.

These findings were reflected in the survey findings. From the baseline to the end, the average responses from participants moved from 'neutral' to 'agree' on the following measures:

- "I feel confident to support children to develop positive attitudes towards numeracy."
- "I feel able to support adults with low confidence in numeracy."
- "I feel confident to help parents and carers to engage with their children's maths learning."
- "Overall, I feel confident to support others in developing positive attitudes towards numeracy."

One of the biggest changes seen in the surveys was in relation to the statement "I know about good resources to help families with numeracy." This increased by over 1 point on the scale, with responses as shown in the graph below:



As can be seen, the shift from 'disagree/strongly disagree' at the baseline to 'agree/strongly agree' on the end surveys is overwhelming, and this is promising for practitioners' work with families in future.

Participants' comments on the surveys and feedback forms also give some insight into why they found the training beneficial:

- "I do not view maths in a negative light anymore and when I do come across someone being scared of maths I feel equipped to help ease their anxiety."

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- “I found the additional resources useful as I will be able to refer back to them as part of my professional practice.”
  - “I work with families who are extremely deprived and really struggle to engage with school. Listening to [the trainer], and reading the information provided during the sessions which was backed up by data was very inspiring and gave me hope that I can begin a positive dialogue with some of my parents.”
  - “The key change for me was around the view and belief that some people were naturally more ‘maths people’. Challenging this belief was eye opening.”
  - “Rather than giving me ideas for activities alone, it has also given me a better idea of how to talk to our learners and children (as a parent). This I have found to be different and better than other training.”

When asked on the feedback forms what was most useful about the programme, many of the respondents mentioned being able to network and share ideas with others. For instance, one respondent said: “The breakout rooms were extremely helpful as I had an opportunity to discuss various topics and listen to different viewpoints and ideas with STEM ambassadors and other CLD practitioners.”

This was a key aim of the programme, offering CLD practitioners and STEM Ambassadors the chance to make connections and encouraging future collaboration and partnerships.

88% of survey respondents agreed or strongly agreed that the programme had given community learning practitioners and STEM Ambassadors the opportunity to network and connect with each other.

In addition to this, 90% of community learning practitioners who responded to the survey agreed or strongly agreed that as a result of the programme, they are more likely to request the support of a STEM Ambassador for their setting. 80% of STEM Ambassadors agreed or strongly agreed that they are more likely to offer their support as a STEM Ambassador to practitioners in community learning settings as a result of the programme.

Overall, 97% of respondents said that they would recommend the training to colleagues.

When asked on the end survey about any changes they have implemented in the way that they support numeracy as a result of this programme, participants gave a range of encouraging responses, such as:

- “I delivered a short session with some adult literacies learners on the content around maths anxiety.”
- “Being more aware of anxiety around maths and how to support this.”
- “Changing how I talk about maths with a young person and make it real and that they can do it.”
- “Supporting staff in schools with ideas from this training to develop positivity around maths.”
- “Have organised a parent forum to see how they feel and what we can do to support them in terms of numeracy and supporting their children as well as improving their own confidence.”
- “Myself and two colleagues are now working to plan a programme to work with families on their maths and how we can make it fun.”
- “I am promoting numeracy skills as much as literacy skills now (even in ESOL classes), as functional adult learning.”

Participants are already carrying their learning from this programme into their practice, and it is hugely encouraging to hear about the positive impacts the training has already had on their work, even in such a short timeframe.

Overall, the programme has delivered positive impacts for both CLD practitioners and STEM Ambassadors in terms of developing their knowledge and understanding to support both adults and children with STEM and numeracy learning.

## **Phase 2**

If successful in our bid for funding for phase 2, National Numeracy and the Scottish STEM Ambassador Hub will roll out the training programme to the three remaining RICs in Scotland which were not targeted in phase 1.

An additional programme will also be provided for practitioners across the whole of Scotland who may have missed the initial opportunity in their RIC. As in phase 1, the training will be available to both community learning practitioners and STEM Ambassadors.

National Numeracy will also extend the support offered to trained champions, offering ongoing networking events and opportunities for champions to come together to share best practice, challenges and learnings with each other.