



**VOLUNTEERING  
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# **Number Partners**

## **Impact Report 2014**



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Education  
AND  
Employers

# 1 INTRODUCTION

Maths shapes everything that we do, at school and beyond, and numeracy – understood as the ability to access, use, interpret and communicate mathematical information and ideas – is an essential life skill for primary school pupils. We also know from the OECD (Organisation for Economic Co-operation and Development) that both mathematical ability and confidence in one's own mathematical ability influence career decisions and future success in the labour market. Therefore it is vital that young people are both numerate and confident of their mathematical ability.



To support numeracy and enthusiasm for mathematics amongst pupils, many schools engage with volunteers and employees. One such scheme is Number Partners ([www.numberpartners.org](http://www.numberpartners.org)); a unique national project that engages volunteers, largely from the business community, to visit a local school for half an hour each week to help young people develop their numeracy skills. Following some initial training, Number Partner volunteers play number games and undertake number-based activities with pupils who are selected to participate by their teachers, with the aim of making maths fun, increasing confidence and improving attainment in numeracy. Number Partner activities are aimed at 7 to 14 year olds but can be adapted for younger or older audiences according to the preference of teachers or co-ordinators who select students to participate in the programme.

Number Partners is a unique model; consequently, unlike equivalent reading schemes, no systematic evaluations of the impact and benefits to participating young people are available. In April 2014, the Education and Employers Taskforce conducted a survey to identify the nature and extent of the impact of the Number Partners scheme, analyzing responses from 28 teachers, teaching assistants, head teachers and maths coordinators at schools that currently participate in Number Partners.

This short guide sets out information about pupil selection, how the scheme is organised in schools and the benefits that teachers perceive the scheme has for participating pupils. It is intended to raise awareness and understanding of Number Partners and help schools that are considering joining the Number Partners scheme with the decision making and planning process.



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## **2 KEY FINDINGS**

The majority of teachers said that participation in Number Partners had **improved pupils' chance of reaching their individual numeracy targets.**

In most cases Number Partner activities are targeted at low and middle achievers to help improve their progress and attainment in maths, with a particular **focus on children who are low in confidence** or who do not have a supportive home environment.

Teachers perceived that progress is linked to an **increase in confidence and enthusiasm for maths** amongst pupils, and **greater perseverance** in the face of challenges .

Teachers reported a host of benefits far beyond enhanced numeracy skills and attainment including **improved concentration, listening skills, verbal expression, motivation and aspirations** after 6-9 sessions with a Number Partner.

Improvements in pupils' **understanding of the world of work** and participation in the classroom were highlighted, as well as the fact that volunteers often act as **role models**, offering an insight into a world beyond the one the children are familiar with.

Challenges associated with setting up Number Partners include logistical issues, ensuring alignment between strategies learnt in school and practised during Number Partner sessions, and finding time to feedback progress to volunteers.

*From the 2014 Education and Employers Taskforce survey of 28 teachers, teaching assistants, head teachers and maths coordinators at schools that currently participate in Number Partners.*



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## CASE STUDY

### Number Partners at Bigland Green Primary School

Bigland Green, a Primary School in East London, has been taking part in Number Partners since 2011 supported by business volunteers from Total Objects and Aspen.

In 2014, ten Year 3 pupils were selected to participate in the Number Partners scheme on the basis of their confidence and current maths attainment, with a focus on children who are working at or just below age-related expectations.

Between September 2013 and April 2014, all of the children participating in Number Partners had progressed by at least 1 sub-level since being paired with their Number Partner, and one child had made 2 sub-levels of progress.

*Tracy Crannitch, Assistant Head Teacher, says: 'It is definitely worth it. The children love it and time wise it is an easy way of enriching the curriculum. Children are much more willing to give things a go in class and perseverance and confidence have definitely increased.'*



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### **3 HOW DOES NUMBER PARTNERS WORK?**

#### **Volunteers**

Number Partners is supported by brokers, such as Education Business Partnerships, who support volunteers and employers in setting up and sustaining a link with a local school. Where such organisations are not present, volunteers are able to use resources available on the Number Partners website.

Number Partners volunteers are largely from the business community though parents, retired people, students and other members of the community are also involved. Each group appoints a coordinator who leads on communication between the school and the group of volunteers. Coordinators recruit volunteers through publicising the opportunity in mail-outs, meetings, using posters and holding information sessions.

Volunteers need to complete a Disclosure and Barring Service (DBS) check before taking part; this screens their criminal record and ensures they are safe to work with children. Online training is available for volunteers on the Number Partners website or, where the group is supported by a broker, face to face training is provided.

#### **Pupil Selection**

Drawing on the survey responses from participating primary schools it is clear that many have engaged with Number Partners over a long period of time. Respondents most commonly (11 schools or 39%) reported that their school had participated in Number Partners for between 2 and 5 years, with a further 7 schools (25%) having participated in the scheme for more than 5 years. However 5 schools (18%) had participated for between 1 and 2 years and a further 5 schools (18%) for less than 1 year.

Number Partner volunteers at the 28 responding schools support children from Year 2 to Year 6, but with a particular concentration at Years 3, 4 and 5. The average number of participating students at Number Partner schools is 11 (ranging from 2 to 24) although teacher comments indicate that participation is constrained by the limited number and availability of volunteers. Number Partner sessions generally take place once a week for between 15 and 30 minutes.

Schools differ in whether the duration of pupil participation in Number Partners is measured in the number of sessions that take place or length of time. However it is clear that there is considerable variation in practice between schools: responses ranged from 1-5 sessions or half a term to 41-50 sessions or a full school year.

There is also variation in how and why schools select pupils to participate in Number Partners. In most cases low and middle achievers are targeted to help improve their progress and attainment in maths, with a particular focus on children who are low in confidence or who do not have a supportive home environment. Some schools also draw on the scheme to support children with Special Educational Needs.



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## “How are pupils selected to take part in Number Partners?”

*‘Children who are not performing at a national average or need the benefit of extra practice.’*

*‘Children who are low/middle ability who need extra support with number work. Also children with low confidence in themselves/their maths ability.’*

*‘Attainment levels are reviewed, also those requiring extra support due to having little support at home.’*

Schools also use Number Partners to engage and stretch high attaining pupils.

*‘We wanted to offer some of our gifted Key Stage 2 mathematicians the opportunity to engage in some open ended maths problem solving activities.’*

*‘Children who are high achievers according to their teacher’s assessment.’*

In one school who responded to the survey, nearly all pupils in Years 3 and 4 take part in Number Partner activities.

*‘In year 3 and 4 nearly all children have a turn at being involved with Number Partners. In year 5 and 6, the majority of students whom are selected are those who are lower attaining or having less experience with maths.’*



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## Organising a Successful Scheme

The survey responses and comments offer insight into how Number Partner activities are organised in schools and some of the logistical and other challenges that schools may wish to consider. Many of the issues identified were logistical; such as finding sufficient space for the activities, or dealing with absences of either Number Partners or children.

Several respondents also highlighted issues around selecting pupils to participate and deciding which children would benefit the most. Some of these dilemmas linked to the scale of Number Partners in their school and the need to manage demand from children to participate.

### “What are the three biggest challenges?”

*‘Being organised with a room and equipment. Adult to welcome adults in and out of sessions.’*

*‘Having successful communication between class teacher, number partners and link teacher regarding progress and sessions’*

*“To ensure the children eat their lunch earlier than the rest of their class.’*

*‘Making sure you target the right children.’*

*‘Suitable area to hold group where won’t be interrupted.’*

*‘Finding time for number partners to meet with teachers.’*

*‘Some other children want to work with the Maths Partners too.’*

Teachers also raised issues around finding time for Number Partners to meet with teachers to communicate about the progress of participating children, and ensure alignment between school teaching methods and Number Partner activities.

It is important to bear these in mind but also to reflect on the comments of one respondent:

*‘Thankfully there are more pleasures than challenges.’*



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## CASE STUDY:

### **Number Partners at Holywell Primary School**

Holywell Primary School in Leicestershire believes that links with the wider community and interactions with adults beyond parents, teachers and support assistants are key to being a successful school.

*Liam Battison, Maths Coordinator at Holywell Primary School, says: 'It is a worthwhile and fulfilling programme for both pupils and the Number Partners involved. The children really benefit and absolutely love it! As a coordinator, it is fantastic knowing that we have a support programme for pupils who really need one to one, just to improve their mathematical confidence.'*

The school select children from Year 3 and Year 4 to take part in Number Partners because they are low on mathematical confidence, and their progress is tracked over the course of the scheme. Pupils are paired with a different Number Partner each week to receive extra support with their maths in friendly, non-stressful environment. Sessions last for 30 minutes once a week, over the course of a term.

During the last academic year, participating pupils increased their end of year target by one sub level, as well as benefiting from increased confidence.



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## 4 THE BENEFITS OF NUMBER PARTNERS

Volunteer supported numeracy schemes and activities are less well known than equivalent reading schemes, and no systematic evaluations of the impact and benefits for participating young people are available.

The following information is taken from the 2014 survey conducted by the Education and Employers Taskforce and aims to enhance understanding of the nature and extent of the impacts associated with participation in Number Partners.



### Impact on Numeracy

The Taskforce survey shows that teachers, head teachers, teaching assistants and maths coordinators with first-hand experience of the Number Partners scheme believe it has positive effects on the numeracy skills of participating children.

The majority of teachers surveyed said that participation in Number Partners had improved pupils' chance of reaching their individual numeracy targets, 66% reporting that it had slightly improved chances and 26% saying that it very much increased their chances, as shown in Figure 1.

### “What are the biggest benefits of Number Partners?”

*‘Improving maths skills by applying in a fun, non-threatening context.’*

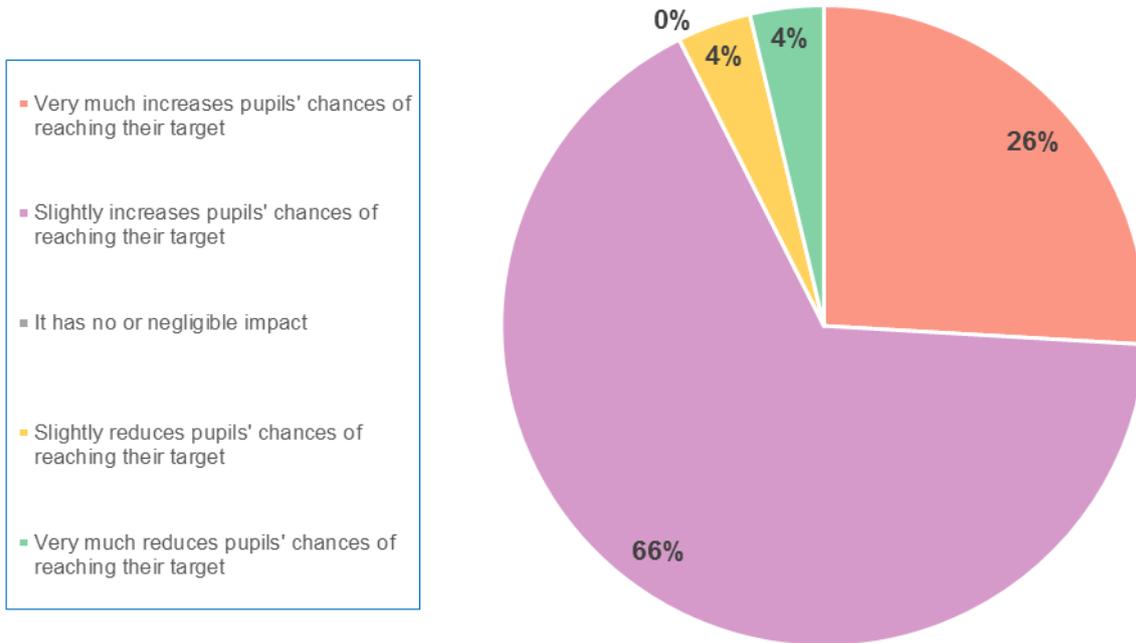
*‘Pupils have the opportunity to practise skills in small group with direct support from an adult to help with misconceptions and errors.’*

*‘Can work on targeted areas e.g. times tables.’*



## Figure 1: Impact of Number Partners on numeracy attainment

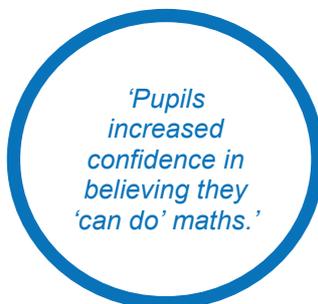
**Survey Question: In your view what impact, if any, does the Number Partners scheme have on the chances of participating pupils making progress towards their individual numeracy targets? (N=28)**



This indicates that a short weekly meeting with a Number Partner volunteer can have a positive and measurable impact on the numeracy skills and attainment of participating children, and one that outweighs any potential loss of classroom time. Comments from teachers suggests that this progress is linked to improvements in two dimensions: enhanced maths skills developed through practice with a Number Partner and an associated increase in confidence and enthusiasm for maths amongst pupils.

### Impact on attitude

Teachers also reported improvements in attitudes towards maths and perseverance in the face of challenges as well as greater enjoyment of the subject amongst participating pupils.



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## CASE STUDY: **Number Partners at English Martyrs**

In 2013, 24 pupils at English Martyrs Catholic School, Tower Hamlets, had a weekly Number Partner who spent 30 minutes with them on a one to one basis. 14 of the pupils were in Year 6, and the remaining 10 were all in Year 4. They have been selected to take part in the Number Partner scheme because they either lack confidence in their mathematical ability, or required an opportunity to be challenged and stretched.

Pupil progress was tracked from the start of the academic year, and after the first term, 9 of the 24 pupils had made adequate progress, whilst 15 had made a higher than expected rate of progress.

One pupil said last year of his Commerzbank volunteer; “My favourite thing about having a Number Partner is that he tells me what goes on in his work.”

Half way through the year, only two pupils remained below the expected level; however, one of these pupils had very poor attendance and the other had a specific learning difficulty with maths, which was thought to impact upon their progress.

Bronagh Nugent, Head Teacher at English Martyrs School, says that previous experience indicates that this gap will narrow as the pupils continue to receive additional support in the form of a Number Partner.



## Additional Benefits

Interestingly, by far the majority of teachers reported a host of benefits beyond enhanced numeracy skills and attainment. Respondents identified that Number Partners had a positive impact on the concentration, listening skills, verbal expression, confidence, motivation and aspirations of participating children as well as improvements in their understanding of the world of work and participation in the classroom. Teachers reported that these benefits tended to manifest themselves after 6-9 sessions with a Number Partner although views varied.

**Figure 2: Where Number Partners is felt to have its biggest impacts for children**

	It makes a lot of difference	It makes a little difference	It makes no difference
Confidence	64%	32%	6%
Motivation	54%	42%	4%
Ability to express thoughts and ideas verbally	48%	44%	7%
Concentration	44%	44%	11%
Numeracy	43%	57%	0%
Listening skills	43%	46%	11%
Aspirations	35%	50%	15%
Understanding of the world of work	30%	52%	19%
Participation in the classroom	26%	64%	7%
Literacy	8%	50%	42%
Participation in playground activities	8%	46%	46%
Ability to express thoughts and ideas in writing	4%	46%	50%



It is noteworthy that teachers identify such sizeable impacts on the confidence, motivation, verbal expression and concentration of participating children from a once-a-week meeting with a Number Partner. This suggests that the benefits of participation in Number Partners extend far beyond numeracy skills, a sense that is further reinforced by teacher comments about the greatest overall benefits of the scheme.



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- **Confidence and social skills**

*'Giving quieter, less confident children a chance to speak 1:1 with another adult.'*

*'Children develop self-esteem and social skills.'*

*'Children more confident in their whole well-being.'*

Teachers also highlighted the fact that Number Partner volunteers often act as role models for participating pupils and offer insight into a world beyond the one the children are familiar with.

- **Role models**

*'Positive role-model for children who can develop aspiration.'*

*'Giving children the opportunity to develop a relationship with a non-staff adult.'*

*'Good role models in industry.'*

Linked to this, teachers report that participation in Number Partners and interaction with Number Partner volunteers can help broaden the horizons of children and deepen the links between children, the school and the community.

- **Broadening horizons**

*'Understanding of world of work / different communities.'*

*'Meeting adults from different walks of life.'*



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## **5 CONCLUSION**

In the absence of a systematic evaluation of number partner type activities, the Education and Employers Taskforce designed a survey for teachers, head teachers, teaching assistants and maths coordinators at schools that currently participate in Number Partners. This online survey was distributed to Number Partner schools in April 2014 and 28 responses were received.

Since the survey is relatively small, care must be taken not to overstate the findings. Nonetheless what emerges is a sense that participating in a Number Partners scheme can help pupils to improve not only their numeracy skills, but also their confidence with, and enthusiasm for, maths.

Equally important are the range of additional benefits for young people that teachers associate with participation in Number Partner activities. These extend far beyond numeracy and mathematics to include positive impacts on the confidence, motivation and concentration of participating children at school and improved verbal expression. In written comments teachers also highlight the positive influence of Number Partners as role models and the fact that participation in the scheme means that children meet people from a wide range of backgrounds and a variety of careers who they would not otherwise encounter. In combination, such activities can help broaden horizons and raise confidence and aspirations.



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## 6 FIND OUT MORE

Number Partners is managed by:

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info@numberpartners.org  
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National Number Partners is led by a consortium of organisations from the business and community sectors. Members include Bank of America Merrill Lynch, Business in the Community, The Cooperative Group, Education and Employers Task Force, Every Child Counts, Financial Conduct Authority, Freshfields Bruckhaus Deringer LLP, KPMG LLP (UK) and National Numeracy.

**Inspiring the Future - [www.inspiringthefuture.org](http://www.inspiringthefuture.org)**



*Inspiring the Future* is a free online service launched in July 2012 by the Education and Employers Taskforce charity. It gives primary and secondary school teachers access to more than 14,000 volunteers from the world of work who have pledged at least one hour of their time to talk about their job, career and the educational route that they took.

Volunteers and schools are connected securely online, with volunteers receiving invites from teachers at local schools to see if they can attend activities during the academic year based on the chosen specialisms and activities that they have selected when creating their *Inspiring the Future* profile. Hundreds of employee volunteers registered on *Inspiring the Future* have expressed interest in becoming number partners and reading partners.



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