

Evaluation of Science Families



Science Families is a science-based family learning project in Newcastle, aimed at children between the ages of three and 13 years and their parents or carers. Between 2008 and 2011, the project delivered fun and engaging science workshops and short courses in community venues. The project is targeted at families who live in the deprived wards of Newcastle which have a number of indicators to suggest low science interest and activity.

Introduction

Science Families is a partnership project between Northern Learning Trust, a Third Sector organisation and Newcastle City Council's Family Learning Service and Library Service. It began in 2008 with funding from the Big Lottery and will end in July 2011.

The courses and workshops cover the three scientific core areas of biology, chemistry and physics.

The project's aim is *to make science accessible and understandable and part of everyday learning for families. It seeks to engage and inspire*



families, encourage awareness of its value and equip parents with the skills and knowledge to support their children's learning and activities.

Family learning

Family learning describes a range of activities that involve parents, children and the wider family in learning, often involving children and adults in learning together. It is intended to stimulate learning in both adults and children, helping the adult to support the child's learning from birth and throughout their school years. It often has an emphasis on being informal, fun and engaging.

Science Families use a family learning approach to teach science. This consists of either workshops or five week courses which are attended by parents or carers and their children. The workshops last around 90 minutes and the courses are one hour per week. The emphasis is on practical activities, fun and the involvement of both adult and child in the learning.

This evaluation was a funding requirement of the Big Lottery and was commissioned by the Science Families partnership. It makes a number of findings.

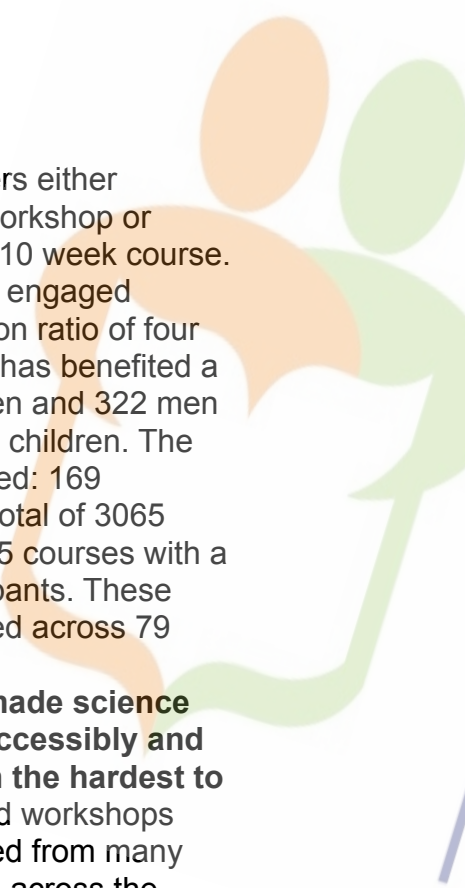
Findings

The evaluation makes the following general findings.

- **The project has benefited a total of 4032 people:** this is substantive

contact with learners either participating in a workshop or attending a five or 10 week course. More women have engaged compared to men on ratio of four to one: the project has benefited a total of 1330 women and 322 men and a total of 2380 children. The project has delivered: 169 workshops with a total of 3065 participants; and 85 courses with a total of 920 participants. These have been delivered across 79 different venues.

- **The project has made science learning locally accessibly and has engaged with the hardest to reach:** courses and workshops have been delivered from many community venues across the postcode areas and there is evidence that the project has successfully engaged with those learners living in the deprived wards of Newcastle that are considered the hardest to reach.
- **The project was reactive and responsive:** the project has reacted well to barriers, put in place effective strategies and overcame problems well.
- **The project developed effective monitoring systems and made good use of information:** the project developed a comprehensive and thorough database which has been used well by the project.
- **The family learning model has worked well and been effective:** this new combination of delivering science learning using a family learning delivery model has achieved considerable results. These include: bringing science learning to communities where it



would not otherwise occur;
engaging hard to reach groups;
and stimulating progression into
further learning.

- **The project partnership has worked well:** it was reported by all project partners¹, that the partnership working arrangement has worked well. This was experienced on a number of levels, from partner organisations promoting the project, facilitating the use of venues and supporting it strategically.
- **Benefits have been shared across the partnership:** the direct partner organisations have each benefited from the project. They have particularly benefited from the unique and close working partnership arrangements between a statutory and voluntary organisation learning from and supporting each other to jointly manage the project and share the employment of staff. Newcastle Council's Family Learning service has gained an additional learning area and can refer adults and families into the project. The Library Service has increased and improved its portfolio of activities it can offer to the public and thus expanded the ways in which they can try and attract people into libraries. The Northern Learning Trust has strengthened its relationships with community-based organisations and has developed expertise in a new curriculum area.
- **The Advisory Board was considered effective and useful:**

it was reported that when the Board met, it was valued.

Findings from learners

The evaluation makes the following findings from learners.

- **The content of the courses and workshops was appropriate and was pitched at the right level:** in a sample of 770 learners in 2009 who had participated in either courses or workshops, 95 percent (n=732) of learners found the educational material to be 'just right', with one percent (n=11) finding it too difficult and four percent (n=30) too easy.
- **Learners found the activities fun, engaging and non-threatening:** over 95 percent (n=3820) of all learners found the courses and workshops to be well delivered, in a friendly atmosphere and they found them enjoyable.
- **The courses changed the way in which people behaved and thought:** in a sample of 250 course participants in 2009/10, a total of 40 percent (n=100) of people said that they had changed something in their lives because of the science course.
- **Parents felt more confident helping their children with**

“

We learnt how the world moves round

”

Paul, 13 years old

¹ i.e. direct project partners: Northern Learning Trust, Newcastle City Council's Family Learning and Libraries Services.

science-related learning: a total of 51 percent (n=843) of adults reported being more confident in supporting their children's science-related learning and 80 percent (n=1321) of course participants said that they had more skills and knowledge to help their children with science-related learning.

- **The project increased people's knowledge about science:** in a sample of 2009/10 course participants, a total of 62 percent (n=1024) of adult learners reported that their knowledge about science had improved as a result of participating in the courses.
- **Learners progressed onto further science learning:** a total of 587 adult learners accessed more than one course or workshop. This demonstrates learner enthusiasm and progression to other science learning opportunities.

Findings from partner agencies

The evaluation makes the following findings from the project's partners, including referring agencies, community organisations and strategic organisations (such as Newcastle Science City).

- **The project's delivery model is unique and innovative:** it was felt by partner agencies that the model of combining science and family learning worked very well and was unique in the region.
- **The project has generated new science learning:** this has been done in a number of ways, from

bringing science activities to locations where none would have otherwise existed to generating interest and thought where previously there may have been none. It has also stimulated an interest in learning in science amongst participants where one may previously have been absent.

- **Science Families brings something new to local communities:** it was reported that the project brought something new that had not been previously been experienced in local communities.
- **It brings people into libraries:** there is evidence to indicate that the project has increased library numbers and has brought people into libraries who would not normally come to a such a venue. It does this through by stipulating that an adult must accompany children on the courses. The project has also helped to develop their existing resources, when the science books are displayed at a course or workshop.
- **It contributes to the objectives of other agencies:** there is evidence that the project helps other organisations achieve their targets. For example, it helps achieve the strategic objectives of Newcastle Science City: these include increasing both the number of people engaged with science and improving their knowledge about science.
- **Science Families plays a unique role in delivering science education:** there is no other organisation in Newcastle that delivers science to families and in particular to families from deprived

areas and those considered hard to reach.

- **The project has worked well in partnership with other organisations:** there was evidence that the project has worked well with other organisations. Several agencies reported that the project was highly cooperative and flexible and have shared resources.
- **The project team have been of high quality:** it was reported that the project was effectively delivered and the coordinator and the tutors have been described as *“very engaging, they use the right terminology, good value for money”*.
- **The project approach has been effective at engaging people:** it was also continued that the project team brought science to people in an appropriate and effective way.
- **The outreach model is effective:** it was noted by one community organisation that the outreach model used by the project is effective at engaging local people.
- **The courses were popular with local residents:** several community based organisations which had been venues for several workshops and courses, reported that they had a waiting list.
- **The project helped children learn about science:** this was both through direct involvement of children in science-based activities and also through increasing the learning of their parents.
- **Project activities were culturally relevant:** it was reported that the activities were appropriate, relevant and engaging to people from BME groups. For example,

the Halal Lotions and Potions was particularly highlighted as very successful.

- **The project improves self-confidence:** there were a number of reports of how involvement in the workshops and courses improves participants’ self-confidence through improving their understanding.
- **There is a continuing demand for the courses and workshops:** all those organisations interviewed which had previously been venues for the learning reported that they would like more courses and workshops. Comments from such organisations included *“when can we book them again”*, *“people ask when are they coming back”* and *“we need them to do rockets and cars, to get the dads and their boys in”*.



Conclusion

It is the view of this evaluation that the Science Families project has been of the highest quality and has been effective at delivering science learning in the deprived areas of Newcastle.

Science Families has brought something new, entertaining and exciting to local communities: as one manager from a community-based

organisation said “*it is different to what is on offer*”. As a result of this newness, the quality of the delivery and as it involves the whole family, the project has demonstrated a local appetite for science. This appetite comes from both local people and also from community-based organisations, such as libraries and community centres. This is a major achievement as it provides a local delivery and strong community engagement element to Newcastle Science City. Whilst it is recognised that the latter do have their own community engagement initiative, it is clear that Science Families play a major part in that and without them Newcastle Science City’s efforts would be considerably weaker.



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