

**The  
Brilliant  
Club**

Impact Case Study Series

**Starting Young:  
Improving University Access  
Through Early In-School  
Interventions**

November 2017



## Research and Impact Series

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## About the Author

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## Contact Details

This is the first in a series of impact case studies which can all be found on our [website](#). If you would like to learn more about The Brilliant Club or have specific questions about this case study, please contact:

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## About The Brilliant Club

The Brilliant Club exists to increase the number of pupils from under-represented backgrounds that progress to highly-selective universities. We do this by mobilising the PhD community to share its expertise with state schools. In pursuit of this mission, The Brilliant Club delivers two programmes:



**The Scholars Programme** recruits, trains and places doctoral and postdoctoral researchers in schools to deliver programmes of university-style tutorials, which are supplemented by two university trips.



**Researchers in Schools** recruits PhD graduates, places them as trainee teachers in schools and supports them to develop as excellent teachers and research leaders committed to closing the gap in attainment and university access.

Find out more about our work on our website at [www.thebrilliantclub.org](http://www.thebrilliantclub.org).

# Executive Summary

This impact case study presents the evidence and challenges for early university access interventions, drawing from published research and reflections on our own programmes at The Brilliant Club. It is relevant for anyone interested in delivering and assessing education interventions for younger pupils over a sustained period. It is also relevant for policy makers – particularly those in the UK – wishing to better understand why working with pupils from a young age can make a difference to social mobility.

## Research shows early interventions are crucial

- The academic trajectories of pupils from under-represented backgrounds show a major shift between Key Stage 2 and Key Stage 4 (ages 11-16).
- By Key Stage 4, high-achieving children from the most deprived families fall behind lower-achieving children from the least deprived families (Crawford, Macmillan, Vignoles, & others, 2015).
- Emerging evidence in early and sustained outreach work shows promising results but these are few and far between.

## The majority of outreach programmes target 16-18 year-olds

- 85% of outreach programmes that support pupils from under-represented backgrounds target Key Stage 5 pupils (The Sutton Trust, 2008).
- Increasingly, universities are understanding the value of providing outreach programmes to target younger pupils.

## The Brilliant Club runs university access interventions starting from age 10

- In 2016/17, The Scholars Programme worked with 2,044 pupils in Key Stage 2 and 3,255 pupils in Key Stage 3, 44% of whom were Ever6FSM pupils.
- Between 2015-16 and 2016-17 the number of Key Stage 2 and 3 pupils we work with has increased by 84% and 46%, respectively.

## Evaluating early interventions is challenging, here we share The Brilliant Club's approach:

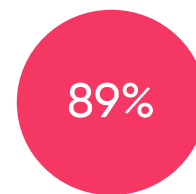
- We systematically assess pupils' academic skills, attitudes, and knowledge about universities (competencies) to understand the shorter-term impact of our programme. We believe this shorter-term impact supports the long-term outcome of progressing to a highly-selective university.
- We collaborate with universities to evaluate the impact of early and sustained university access interventions.

### Research



A third of high-performing primary school pupils from disadvantaged backgrounds do not go to university (Sutton Trust, 2008).

### Impact



Ever6FSM pupils in Key Stage 2/3 that said they were capable of studying at a highly-selective university after participating in The Scholars Programme in Summer 2016-17.

# The Case for Early Interventions

## The transition period between Key Stage 2 and 4 is crucial for pupil outcomes

Socio-economic background plays a key role in shaping academic performance, this is particularly the case for the transitional period between primary and secondary education (in England, primary education is referred to Key Stages 1 and 2; secondary education to age 16 is referred to as Key Stages 3 and 4). A longitudinal study followed 550,000 pupils from age 7 to adulthood, revealing that the primary-secondary transition is a critical period for education interventions. High-achieving children from the most deprived families fell behind lower-achieving children from the least deprived families by Key Stage 4 (Crawford et al., 2015). This finding supported an earlier report by The Sutton Trust on pupils eligible for receiving free school meals (FSM), which indicated that over half of the FSM pupils who performed in the top 20% during primary school did not progress onto university at age 18 (The Sutton Trust, 2008).

Beyond academic achievement, primary school pupils whose parents have never attended universities were reported to have lower aspirations and self-esteem, and were less knowledgeable about post-16 educational routes, universities and future career opportunities (Department for Children School and Families, 2009; Horgan, 2007).

## Research suggests the positive impact of early interventions

Emerging evidence from early intervention programmes for pupils between Key Stage 2 and 4 has consistently indicated positive impact. For example, Into University's FOCUS programme supports primary-aged pupils (age 8+) by introducing them to the concept of university, encouraging them to set termly targets, and teaching them how to monitor their own progress and regulate learning (White et al., 2007). The programme was effective in enhancing pupils' motivation, confidence and self-regulated learning. Another study by the Department of Education tracked 8000 pupils in Key Stage 3 over three years. The results indicated positive impact, particularly for pupils from ethnic minority communities, on academic attainment, attitudes to school and school attendance (MacBeath, Great Britain, & Department for Education and Skills, 2001). More recent research using data from the Longitudinal Study of Young People in England found that both early intentions of HE participation and school-level achievements were highly predictive of actual HE participation (Croll & Attwood, 2013). Together, these results suggest university outreach activities should focus on targeting pupils' knowledge of higher education as well as improving attainment from an early age.



## A disparity between the gap and provision to address it

Despite a seemingly strong case for early widening participation work, research suggests that the majority (85%) of university outreach programmes targeted older pupils in Key Stage 5, and less than 10% reached younger pupils in Key Stage 2 (Year 6 and 7) (The Sutton Trust, 2008). The gap in provision has prompted policy recommendations for the sector to provide more resources on outreach programmes aimed at primary level in recent years (NCEE, 2008). In November 2017, the Office for Fair Access (OFFA) [commissioned a project](#) to better understand the extent to which pre-16 outreach is cost-effective in supporting younger pupils from under-represented backgrounds.

One of the reasons for the limited provision of early university access intervention work may be that long-term intervention is difficult to evaluate, or that it is not seen as directly relevant for younger secondary or primary-age pupils. Also, the primary school sector is fragmented into a larger number of smaller schools than in the secondary sector ([five times](#) as many), and this makes interventions more difficult to scale. Despite these challenges, The Brilliant Club delivers two programmes and systematically evaluates pupils' outcomes starting as young as Key Stage 2. The following section outlines our approach.

## The Scholars Programmes work with pupils from primary school to Year 12

Over the last few years, there has been growing widening participation work with younger pupils, including primary age pupils. The Brilliant Club's programmes aim to increase the number of under-represented pupils that progress to highly-selective universities.

**The Scholars Programme** is a short in-school intervention for pupils from primary school (Key Stage 2) to Year 12 (Key Stage 5). PhD or post-doctoral researchers deliver seven university style tutorials on their subject of expertise to groups of six pupils at a time. The programme aims to help pupils to build academic skills including subject knowledge, critical thinking and written communication, as well as increasing pupils' knowledge of university and meta-cognitive skills. Over half (55%) of pupils selected from each school are required to meet at least one of our targeting criteria: 1) pupil premium eligible; 2) no parental history of higher education in the UK; 3) deprivation according to postcode as indexed by IDACI decile 1-4.

**"I think this trip was spectacular, it has completely changed my mind about uni for the better. I think because of this experience I am more likely to come to uni."**

Key Stage 2 pupil, Southern Road Primary School – The Scholars Programme, Autumn 2016-17

**"I felt that this university has inspired me to work even harder in school and everywhere I go."**

Key Stage 3 pupil, Belvedere Junior School – The Scholars Programme, Autumn 2016-17

## It is possible to impact younger pupils at scale

In 2016/17, The Scholars Programme worked with 2,044 pupils in Key Stage 2 and 3,255 pupils in Key Stage 3, 44% of whom were Ever6FSM pupils. Between 2015-16 and 2016-17 the number of Key Stage 2 and 3 pupils we work with increased by 84% and 46%, respectively; the number of Key Stage 2 and 3 placements more than doubled (Figure 1).

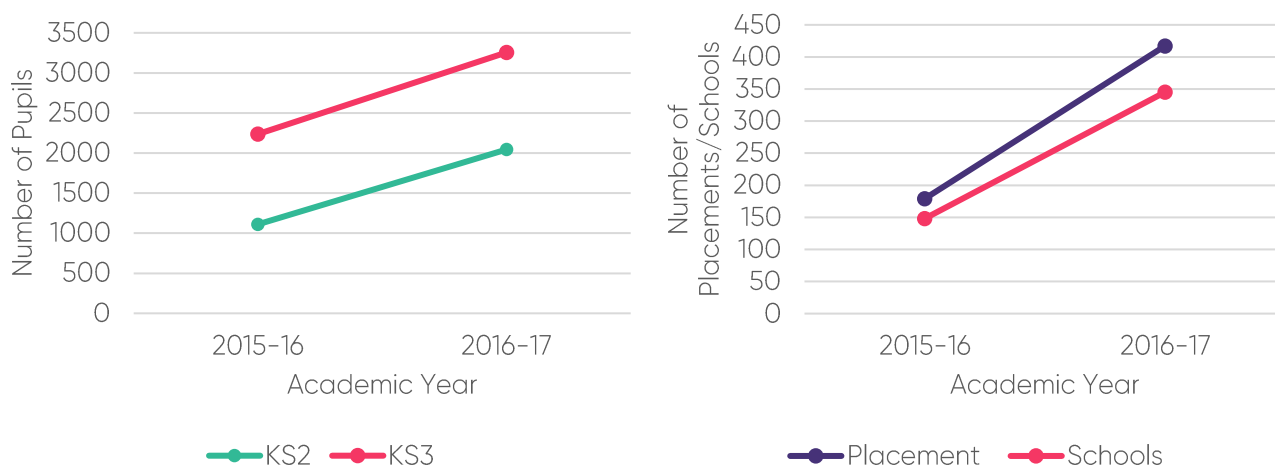


Figure 1. Total number of Key Stage 2 and 3 pupils (left panel); and the number of placements in schools (right panel) that The Scholars Programme has worked with between 2015 and 2017.

## Over 80% of Ever6FSM pupils in Key Stage 2 and 3 plan to attend university in the future

To evaluate the impact of The Scholars Programme on pupils' attitudes about universities, we ask pupils to complete a self-assessment questionnaire at the beginning (pre-assessment) and end (post-assessment) of the programmes. In Summer 2016-17, between 82% and 89% of Ever6FSM pupils in Key Stage 2 and 3 felt they were very likely to apply to go university and that they were capable of studying at a highly-selective university, by the end of the programme.

Self-evaluation statements	Pre	Post	Percentage Change
I am capable of studying at a highly selective university	76%	89%	17%
How likely do you think it is that you will ever apply to go to university to do a degree?	58%	82%	41%

## Sustained Interventions at The Brilliant Club

Outreach activities that provide sustained long-term support are likely to be more effective than one-off interventions. We encourage schools to select pupils who have benefited the programme to continue their participation in The Scholars Programme, when possible.

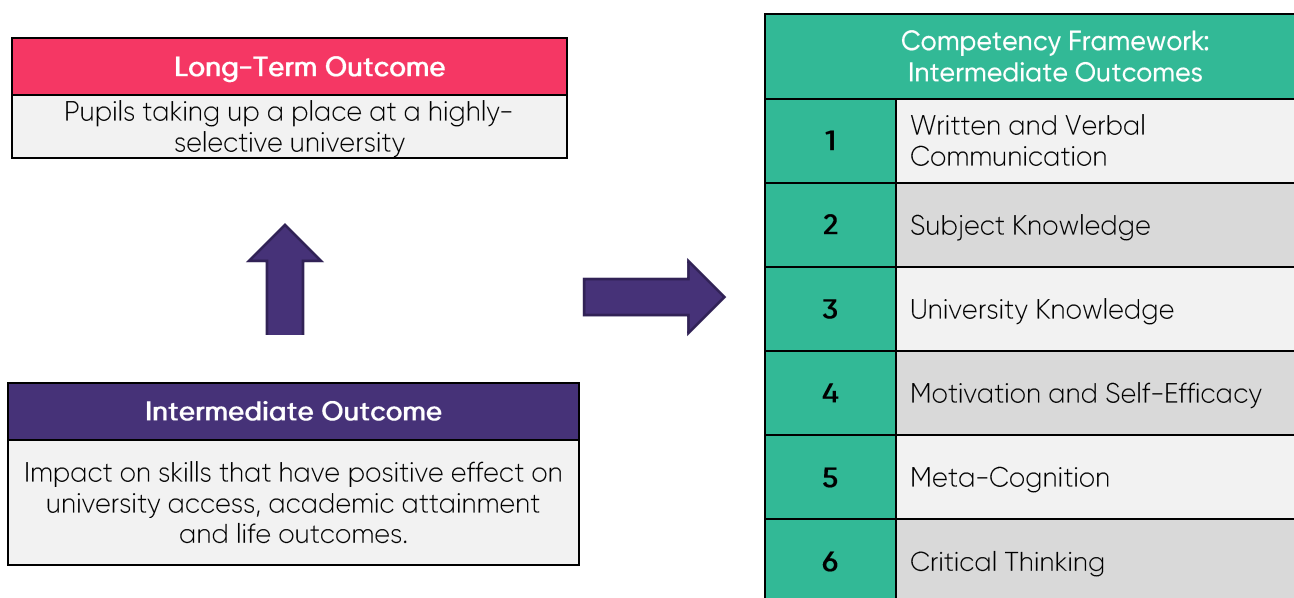
We also run a 2-year intervention programme, **Uni Pathways** which post-doctoral researchers, entering school teaching through Researchers in Schools, deliver in school. The programme starts at Key Stage 4 and includes a set of structured activities that support pupils to improve academic skills, and their confidence and knowledge about applying to a highly-selective university. The activities also aim at increasing subject attainment in GCSE examinations.

Since the start of Uni Pathways in 2016, Researchers in Schools participants have worked with 1,038 pupils; 41% were Ever6FSM pupils; 63% were first in their family to attend university.



## Measuring the impact of early university access interventions

The Brilliant Club’s long-term mission is to increase the number of pupils from under-represented backgrounds taking up places at highly-selective universities. However, as a university access programme working with pupils from age 10, we often have to wait several years to know a pupil’s final education destination. To address this problem, we evaluate the programmes’ impact on competencies or skills which have a positive effect on university access, academic attainment and life outcomes – these are referred to as intermediate outcomes (Figure 2).



**Figure 2. The Brilliant Club’s evaluation approach: intermediate outcomes are assessed through the competency framework which the long-term outcome is built upon.**

This competency framework (Figure 2) is built upon a series of cognitive and non-cognitive skills that the research literature shows as having a positive impact on academic attainment, as well as on life outcomes more widely (Gutman & Schoon, 2013). Cognitive skills are those which relate to mental processes such as remembering and reasoning (e.g. critical thinking). These skills are typically assessed in the context of literacy and numeracy. Non-cognitive skills focus on attitudes, strategies and behavioural tendencies that facilitate academic achievement (e.g. self-efficacy). Last year, we began to pilot the measures for these competencies (see [Research Report Series](#) for details). Some of these have been implemented in September 2017, and we will begin our evaluation work for the first round of data in January 2018.

## University collaborations on early and sustained interventions

The Brilliant Club is also working with our university partners to deliver and evaluate university access interventions targeting young pupils from the most deprived areas over a sustained period. In Summer 2017, we collaborated with UCL to deliver a programme that focused on improving academic writing and meta-cognitive skills, targeting pupils living in POLAR3 Quintile 1 areas. Between 2016 and 2021, we are collaborating with the University of Cambridge and Worcester College, University of Oxford on two separate projects that aim to improve access to highly-selective universities by working with under-represented pupils over a minimum of three years. We will evaluate these programmes to better understand the impact of sustained, compared to short-term, interventions.



## Conclusions and lessons learned

Considering that Key Stage 4 attainment is a key predictor for progression to highly-selective universities, the amount of outreach activities targeting pupils before Key Stage 4 is limited. This may be, in part, due to the difficulty of evaluating the long-term impact of such early interventions, although there are unique practical challenges to working in the primary sector. The table below summarises the key challenges which The Brilliant Club has addressed in expanding our work with younger pupils, and the lessons we have learned (Table 1).

**"It gave me a wider view of university and made me think of possible career options."**

Year 8 pupil from St John Fisher School – Insight Peterborough Project, Spring 2016–17

**Table 1. Key challenges of early intervention work and the lessons that we have learned.**

Challenges	Why is it a challenge?	How The Brilliant Club aims to overcome the challenge	Lessons learned
Primary schools are smaller and more numerous	Challenging to manage communication and deliver consistent programmes.	We prioritise our relationships with schools, and as a result, our network with schools continues to grow from school-to-school recommendations.	Clear and streamlined communication with schools to minimise work for teachers.
Making university relevant to younger pupils	Some universities not fully understanding the value in outreach activities for younger pupils.	Actively communicating our research and evaluation work to universities, emphasising helping pupils to build the skills that prepare them for university.	Link our work closely with university OFFA agreements. Work with universities to deliver, monitor and evaluate our programmes.
Resource-intensive tracking	Tracking pupils repeatedly from an early age requires extensive time and resources.	We work collaboratively with schools and higher education bodies (e.g. UCAS) to streamline our monitoring processes.	Where possible, we strike a balance between measuring shorter-term impact and using established systems (e.g. HEAT) to track longer-term impact.
Evaluation methodology	Longitudinal data needs to be analysed and interpreted with caution to ensure that results are not due to other factors unrelated to the intervention (e.g. change in curriculum or school strategy).	Our Research and Impact Department is a team of social scientists, who help us understand both the strengths and the limits of our impact evidence.	We plan to supplement our ongoing evaluation of programme impact with a robust external evaluation that can consider more complex questions of causation.

## Bibliography

- Crawford, C., Macmillan, L., Vignoles, A., & others. (2015). When and why do initially high attaining poor children fall behind? *London, Centre for Analysis of Social Exclusion, London School of Economics*. Available Online at: [Http://Sticerd.lse.ac.uk/Dps/Case/Spcc/WP20.Pdf](http://sticerd.lse.ac.uk/Dps/Case/Spcc/WP20.Pdf) (Accessed 8 May 2016). Retrieved from <http://sticerd.lse.ac.uk/dps/case/spcc/WP20.pdf>
- Croll, P., & Attwood, G. (2013). Participation In Higher Education: Aspirations, Attainment And Social Background. *British Journal of Educational Studies*, 61(2), 187–202. <https://doi.org/10.1080/00071005.2013.787386>
- Department for Children School and Families. (2009). *Quality, Choice and Aspiration. A strategy for young people's information advice and guidance*. Retrieved from <http://webarchive.nationalarchives.gov.uk/20130321071919/https://www.education.gov.uk/publications/eOrderingDownload/IAG-Report-v2.pdf>
- Gutman, L. M., & Schoon, I. (2013). The impact of non-cognitive skills on outcomes for young people. *Education Empowerment Foundations, London*. Retrieved from [https://v1.educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive\\_skills\\_literature\\_review\\_1.pdf](https://v1.educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive_skills_literature_review_1.pdf)
- Horgan, G. (2007). *The impact of poverty on young children's experience of school*. Joseph Rowntree Foundation & Save the Children. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=04FF5BD080FB087DABF7DA26EF1EFB45?doi=10.1.1.533.2553&rep=rep1&type=pdf>
- MacBeath, J. E. C., Great Britain, & Department for Education and Skills. (2001). *The impact of study support: a report of a longitudinal study into the impact of participation in out-of-school-hours learning on the academic attainment, attitudes and school attendance of secondary school students*. London: Dept. for Education and Skills.
- NCEE. (2008). *National Council for Educational Excellence: Recommendations*.
- The Sutton Trust. (2008). *Increasing higher education participation amongst disadvantaged young people and schools in poor communities* (Report to the National Council for Educational Excellence).
- White, K., Eames, A., Sharp, C., & National Foundation for Educational Research in England and Wales. (2007). *A qualitative evaluation of the IntoUniversity programme*. Slough: National Foundation for Educational Research.