

on the front foot
independent
evaluation report

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EXECUTIVE SUMMARY

In December 2014, Nicky Morgan MP, the Secretary of State for Education, announced £5m worth of funding to highlight best practice, support provision, and develop the evidence base for character education in England. As part of this initiative, Premiership Rugby designed and delivered a programme using rugby's core values of Teamwork, Respect, Enjoyment, Discipline and Sportsmanship to build character and resilience in pupils – the On the Front Foot programme – delivering to approximately 17,000 pupils across primary and secondary during the course of the 2015/16 academic year.

Demos were approached by Premiership Rugby to undertake an independent evaluation of On the Front Foot in its final phase of delivery, from January to March 2016 – this report presents the results of that evaluation. The evaluation sought to capture findings both in terms of impact on the character capabilities of participants, and on process: what the participants, teachers and coaches thought had been successful, and what could be improved about the programme.

Impact findings

In order to evaluate the impact of the programme on both primary and secondary participants, we used a pre and post questionnaire consisting of validated psychometric questions (modelled on a Behavioural Insights Team instrument), where respondents were asked to rate themselves across various character capabilities and other measures on a 0-10 scale. We sought to measure the following outcomes: leadership, self-efficacy and communication (mapping onto confidence); resilience, self-regulation, problem-solving and creativity (mapping onto resilience and focus); locus of control (mapping onto discipline); in addition to empathy and co-operation (a cluster of social and emotional skills included in the instrument). Table 1 maps the measures used against the outcomes, and Tables 5 and 6 in appendix 1 maps the measures to the questions used.

We then analysed this data to calculate the change in the means on each of our measures before and after the intervention, and then tested each difference using a paired t-test, to ascertain if it is

statistically significant. In our findings chapter, we also present the results a number of other ways to aid interpretation, including providing effect sizes. The total sample for primary of completed surveys, once pre and post data had been matched, was 1090 participants, while the total for secondary was 477 participants. We also undertook a survey of 20 teachers whose students had participated in the programme (out of 130 who participated during the period under study) in which we asked questions about the programme's impact. The sample was small and self-selecting and therefore these results should be treated as indicative.

The key results are as follows:

- Secondary participants demonstrated statistically significant increases in self-reported 'performance character': grit increased by 7 per cent, self-efficacy by 9 per cent, problem-solving by 9 per cent, creativity by 8 per cent and locus of control by 5 per cent.
- There were also significant improvements for secondary in character capabilities related to social skills: empathy increased by 8 per cent, communication by 10 per cent, cooperation by 8 per cent and leadership by 9 per cent.
- Secondary participants demonstrated good knowledge retention when tested on the values that were the focus of the programme, with 80 per cent of respondents being able to name four of the five values, and over 75 per cent all five.
- There were also statistically significant improvements among primary participants: a 5 per cent reported increase in empathy, a 4 per cent increase in leadership, a 3 per cent increase in self-regulation and a 3 per cent increase in self-efficacy.
- Primary participants said that playing rugby was a source of pride; it encouraged them to expand their horizons and try new things; it made them better at working with others; it helped develop respect, teamwork, cooperation and resilience and determination, as one put it:

‘It leads up to later life, when you want to get a job. If you play rugby it teaches you to keep calm, like if you get [tagged], it helps to think, “OK I’m fine, carry on”’.

- Significant numbers of secondary participants felt the programme had not only improved their character but also their performance at school, with 42 per cent feeling significantly more focused, 46 per cent more confident, and 47 per cent saying it had led to better marks at school (percentages answering 8-10 on a scale where 10 is ‘strongly agree’).
- All teachers surveyed thought the programme had had a positive impact, and the vast majority (95 per cent) also thought that the impact would last for the long-term. When asked more specific questions regarding impact, a majority thought that students were now more focused (75 per cent) and confident (85 per cent), and half of those surveyed also thought it had improved academic results (50 per cent).
- The programme also increased sport participation among both primary and secondary participants: the former saw a 4 per cent increase, while the latter reported a 9 per cent increase in sporting activity, and a 14 per cent increase in activity that raised the breathing rate.

Another way of interpreting the findings is by calculating an effect size for the outcomes that showed statistically significant increases. This provides a standardised ‘score’ for the size of the difference between two groups, by taking account of variation in the sample, which allows for comparability across evaluations of similar programmes. Effect sizes are presented for each statistically significant result in chapter 3. As this was a pilot project, it wasn’t possible to secure comparison groups for the evaluation, so the evidence produced by the impact evaluation reaches level 2 on Nesta’s standards of evidence scale.ⁱ As described by Nesta, this means that the ‘data can begin to show effect but will not evidence direct causality’. More detail on the methodology used is presented in appendix 1.

Process findings

The research team also undertook a series of activities in order to evaluate the success of the project implementation. These included three visits to participating schools to observe a session in action, interviews with participants, teachers and coaches during these visits, process questions in the post-intervention survey completed by participants, and an online survey of teachers in participating schools (which received 20 responses and therefore results should be treated as indicative as described above).

The key findings were as follows:

- The majority of participants in the programme who were surveyed enjoyed participating (71 per cent for primary, 63 per cent for secondary, answering 8-10 on a scale where 10 is 'strongly agree'), wanted to keep playing rugby (62 per cent for primary, 54 per cent for secondary), and would recommend it to another (54 per cent for secondary).
- All of the teachers (100 per cent) involved in the programme who were surveyed said that they enjoyed participating in the programme, the programme was a good use of school time, that their school should do more things like On the Front Foot, and that they would recommend it to another school.
- The practical, sport participation element of the programme was most often cited as a highlight by participants in our interviews, though most also valued the classroom aspect and could see how one improved the other.
- In addition to the impressive number who could remember the core values in the survey (75 per cent could name all five values), many of those interviewed during our school visits had picked up the values of the programme and some said they had reflected on them outside of the programme, in other sports, school, and other aspects of their lives.
- The involvement of professional coaches was referenced by participants and teachers at each of the three schools we visited

as being important to the programme's success, as the connection to a local club improved engagement.

- Teachers were unanimous in saying that the programme did not demand too much of them.
- Areas for improvement include the transition between theory and practical components, the overall length of sessions (considered by some to be too long in primary delivery), and potential for continuing links with the club or teacher delivery following the end of the programme.

Conclusion

The evaluative evidence presented in this report shows that, on average, participants experienced a significant positive change in their character capabilities over the course of the programme. This was particularly the case for secondary participants, who reported positive change across every character measure that we assessed, although there were many positive outcomes for primary participants too. This leads us to conclude that it is possible for rugby-based education programmes to develop various character capabilities in participants – including those associated with performance, problem-solving, leadership and social skills – as assessed through self-reported psychometric measures.

Unsurprisingly, this pilot evaluation is not the last word on the question of whether participating in rugby helps to develop character. While these initial results are promising, there is plenty of potential for future research in this area – in the first instance repeating the programme evaluation but with the inclusion of a comparison group and the introduction of systematic randomisation, so as to isolate the effect of the programme on the development of character capabilities and begin to establish a causal link. Future evaluations could also observe a wider range of outcomes, such as school attendance, behaviour and attainment, in order to understand the interrelationship between participation, development of character and school outcomes.

Further research could also identify how the impact of a character intervention structured around rugby differs from those of another sport, and again from a physical activity intervention, or from an outdoor adventure intervention, or a purely classroom based activity. Based on the observations conducted as part of this evaluation, it seems important that there is differentiation within the activities that develop character: while a particularly tough maths problem or a game of chess may develop the resilience and problem-solving skills of one student, another may better develop those capabilities through participating in sport or other physical activity.

This study is an initial contribution to the evidence base on sport participation and character development, demonstrating that participation in a rugby programme is associated with a positive self-reported change in character capabilities. These findings are timely, given the recent Education white paper's plans for a dedicated budget for extra-curricular activities in 25 per cent of schools, partly with a view to developing character. Our suggestion is that in allocating these funds, the Department makes clear what ends it wants the activity to work towards in terms of character development, and that it and participating schools learn from the burgeoning evidence base in seeking to achieve them. This will ensure that the new opportunities presented to young people are of the highest quality and thereby help England on its way to being a world-leader in character education.

INTRODUCTION: CONTEXT, THE PROGRAMME AND EVALUATION

In her speech to the Conservative party conference in 2014, the Secretary of State for Education, Nicky Morgan MP, set out the priorities for her department over the coming years. In addition to a continued focus on educational standards, she also highlighted the importance of a range of skills and values that enable success, described as ‘character’. England would become a world-leader in character education, both to support academic success but also to provide young people with the skills they would need in their lives after school:

For too long there has been a false choice between academic standards and activities that build character and resilience. But the two should go hand in hand. ... As much as I want the next generation to be able to solve a quadratic equation, I also want them to be able to make a compelling pitch for a job, and to be able to bounce back if things don't work out.ⁱⁱ

This focus was encouraged by recent developments in the evidence base indicating character's importance for various later life outcomes (including not just attainment and labour market success but also health and wellbeing) and the role that activities other than academic learning could play in developing character.ⁱⁱⁱ The recent education white paper, *Educational Excellence Everywhere*, has reinforced this priority for the Department:

We will ensure a knowledge-based curriculum is complemented by the development of the character traits and fundamental British values that will help children succeed, and make available funding so that it is easier for 25% of secondary schools to extend their school day to include a wider range of activities, such as sport, arts and debating.^{iv}

As a first step towards this goal, in December 2014 the Secretary of State announced £5m worth of funding to highlight best practice, support provision, and develop the evidence base for character education in England.^v Through this fund, the Department for Education coordinated the first ever Character Awards, to praise

those schools and organisations already leading the way in this area. In addition they provided £3.5m in grant funding to support provision of character-building activities in schools, and another £1m to the Education Endowment Foundation with the explicit remit to develop the evidence base on how activity in schools can develop character.

Premiership Rugby were successful in their bid to design and deliver a programme using rugby's core values of Teamwork, Respect, Enjoyment, Discipline and Sportsmanship to build character and resilience in pupils – the On the Front Foot programme – delivering to approximately 17,000 pupils across primary and secondary during the course of the 2015/16 academic year.^{vi} Outside of school, the project also provided character education to 480 16-19 year old young people Not in Education, Employment or Training, through the 'HITZ' programme. Demos were approached by Premiership Rugby to undertake an independent evaluation of the schools-based component of On the Front Foot, in terms of both impact and process, in their final phase of delivery, from January to March 2016 – and this report presents the results of that evaluation.

This chapter continues with a brief description of the programme and the approach taken to the evaluation. Then chapter 3 presents the results of the impact evaluation to determine what effect the programme had on its participants. Chapter 4 outlines the findings of the process evaluation. Finally, more detail on the method used is provided in a methodological appendix at the end, alongside copies of the questionnaires and other research materials used during the evaluation.

The programme

On The Front Foot is an education and rugby programme for 11-18 year olds which intends to use rugby's core values to develop positive character traits through rugby-themed classroom sessions and sport participation. The programme – designed by Premiership Rugby – consists of six sessions over the course of a half-term, with one half of each session dedicated to classroom learning about a particular value of rugby, and the second half consisting of rugby practice, coaching and games intending to bring the value to life through practical activity. Across all settings, each session focused on one of the five values of rugby – enjoyment; teamwork; discipline; respect; and sportsmanship – with the final session consisting of an assembly to reflect on what has been learned so far and celebrate progress.

Premiership Rugby is the umbrella organisation for England's professional rugby clubs. In designing the On the Front Foot programme they drew on experience from their existing community programmes, particularly the HITZ programme. HITZ works with 3,000 disadvantaged 11-19 year olds annually, using rugby and its core values to develop their personal, life and employability skills ready to return to education, training or find work, with referrals coming particularly from schools, Pupil Referral Units, probation and social services. For On the Front Foot, delivery was undertaken by professional coaches from 14 rugby clubs (all 12 members of the Premiership plus Bristol and London Welsh) who delivered the programme in schools within their local neighbourhoods, which were engaged whether through this pre-existing community work by the clubs or new relationship building for the project.

Each session was designed to have a clear learning objective, and a number of different activities aimed toward this, including instruction, group work and individual tasks in the classroom, and skills training, team-building and competitive games in the practical component. Coaches were asked to set aside time for reflection at the mid-point of the session, before the transition, and at the end. They were provided with programme guides as well as lesson plans and presentational material to be used during delivery,

to give some uniformity to the programme – although they were able to adapt the material to their setting. In developing the classroom resources, Premiership Rugby were supported by the Jubilee Centre for Character and Virtues at the University of Birmingham, the UK's leading academic research centre for character education.

The programme targeted particular groups across two main cohorts:

- Primary school age: with a focus on year 6 pupils in order to help with transition to secondary school. Aiming at a range of economic backgrounds, with 27 per cent of participating schools from the top 20 per cent of deprived areas according to the Indices of Multiple Deprivation, 50 per cent from lower/middle income areas, and the remainder from more affluent areas. A session lasted for two hours and was delivered during curriculum time (whether during PSHE or PE provision). Each club was expected to engage with approximately 15 schools and provide the programme to at least 810 participants.
- Secondary school age: targeting years 9, 10 and 11 participants, to be delivered as a one-hour session during curriculum time as part of PSHE, with a view to preparing participants for the transition to adult life. Each club was expected to engage with four schools and provide the programme to 300 mainstream learner participants. Building on the work of HITZ, delivery was also targeted at learners with behavioural challenges. Schools would identify those that respond better to a more practical approach to character education to receive the programme, to be delivered as a one-hour session during or after school dependent on school's preferences. Each club was expected to engage with four schools and provide the programme to an additional 180 participants with behavioural challenges.

In total, this meant participation of 10,590 primary participants and 6,240 secondary participants, or 16,830 overall across all three strands. At the end of its pilot year it had surpassed these targets, reaching 17,501 participants in 361 schools.

The intended outcomes set by Premiership Rugby for in school delivery were:

- for primary-age participants, increase resilience, focus and confidence ready for the transition into secondary school
- for secondary-age participants, enhance focus, discipline and confidence ready for the transition into adult life

This report will now go on to discuss how these outcomes will be measured.

The evaluation

Demos were approached by Premiership Rugby to undertake an independent evaluation of the final phase of project delivery, which took place over the course of the spring term – between participants returning to school following the Christmas break, and leaving again ahead of the Easter weekend. During this phase of delivery the total number of participants was as follows:

- 108 primary classes – 2,924 children
- 103 secondary classes – 2,069 children

The evaluation sought to capture findings in terms of impact on participants and process findings in terms of implementation: what the participants, teachers and coaches thought had been successful, and what could be improved about the programme. What follows is a description of the method, including instruments and measures used (more detail on methodology is available in appendix 1).

Impact

The impact evaluation set out to investigate the following question:

What impact does participation in On the Front Foot, a six-week education programme based on the core values of rugby, have on character outcomes for primary and secondary participants?

This was measured for both primary and secondary through a pre and post questionnaire consisting of validated psychometric questions, where respondents were asked to rate themselves across various measures on a 0-10 scale. This was supplemented with

qualitative insights from school visits to observe sessions and interviews with participants, teachers and coaches. As this was a pilot project, it wasn't possible to secure comparison groups for the evaluation, so the evidence produced by the impact evaluation reaches level 2 on Nesta's standards of evidence scale.^{vii} As described by Nesta, this means that the 'data can begin to show effect but it will not evidence direct causality', as we cannot be certain that the change we have seen would not have happened anyway.

Regarding character outcomes across both groups, we drew on the Behavioural Insight Team's questionnaire for evaluating youth social action – an instrument comprised of validated questions from other questionnaires.^{viii} We sought to measure the following character outcomes: leadership, self-efficacy and communication (mapping onto confidence); resilience, self-regulation, problem-solving and creativity (mapping onto resilience and focus); locus of control (mapping onto discipline); in addition to empathy and co-operation (a cluster of social and emotional skills included in the instrument). Table 1 maps the measures used against the outcomes, and Tables 5 and 6 in appendix 1 maps the measures to the questions used. Both primary and secondary questionnaires (including post questions) are available as appendices 2 and 3 of this report. Across both groups, we also tested for attitudes to education, and in line with the broader objectives of Premiership Rugby, we tested self-reported participation in sport, adapting a question from Sport England's Active People Survey to measure both whether secondary participants reported taking part in sporting activity, and whether that activity was normally enough to increase their breathing rate.^{ix} Finally, with secondary respondents, we included a knowledge question, testing to see how many could remember each of Premiership Rugby five values – the essential educational content of the programme.

Due to the divergent ages of those taking part, it was important that the surveys were differentiated to reflect expectations of reading age, life experience and attention span. Therefore, for secondary respondents we used the entire BIT questionnaire as it applied to character outcomes, while for primary, we measured a smaller

number of outcomes using fewer questions. The primary questionnaire was also used in Demos’s forthcoming evaluation of the Scout Association’s Character by Doing programme, also supported by the DfE’s Character Grant – lending some consistency to the outcomes measurement of the grant programme. In reducing the size of the questionnaire, we took inspiration from the questionnaire designed for the EEF’s evaluation of Children’s University by Prof Stephen Gorard of Durham University, aimed at Key Stage 2. On the basis of that evaluation protocol we also decided to use one question per outcome in order to ensure the questionnaire was as succinct as possible:

‘Rather than using the usual psychometric approach of multiple questions for each theme, the single best item can be used instead... This approach is at least as accurate in terms of measuring these rather hard to pin-down concepts, and has several advantages including ease of analysis and reporting.’^x

Table 1: Outcomes measured for both primary and secondary, mapped against original outcomes

Primary measures	Secondary measures	Original outcomes
Empathy	Empathy	
Leadership	Leadership	Confidence
Self-regulation		Focus
Self-efficacy	Self-efficacy	Confidence
Grit	Grit (including self-regulation)	Resilience/Focus*
Communication	Communication	Confidence
Co-operation	Co-operation	
	Locus of control	Discipline
	Problem-solving	Resilience
	Creativity	Resilience
Wellbeing	Wellbeing	
Attitudes to school	Attitudes to school	
Sport participation	Sport participation	

*Focus is included as part of the outcomes measure for Grit in the secondary questionnaire

Process

Through the evaluation, we also wanted to investigate the implementation of the programme – to discover what the barriers were, what had been successful and what hadn't, and what could be improved – according to those who had been a part of the programme. Activities undertaken included observations of sessions at three schools (two primary, one secondary) and interviews with a group of participants, and a teacher and coach in each setting. We also included process questions in the post survey of participants and developed a questionnaire for teachers that was distributed through Survey Monkey.

Questions asked of these respondents include satisfaction with the programme; whether they want to continue doing it; whether they would recommend it to another; what they have found most and least valuable; and what they might change about the programme. Results are presented in chapter 4 of this report. For the observations, we drew on the Ofsted Lesson Observation Key Indicators, Charlotte Danielson's Framework for Teaching and the ISU Classroom Evaluation Framework to develop a framework that took account of both classroom and practical activity. The adapted framework records observations according to four domains: environmental aspects; learning habits; delivery and management; and participant behaviours. A copy of the framework is included as appendix 4 of this report.

RESULTS

This chapter presents the results of the impact evaluation, through analysis of the surveys completed by both primary and secondary respondents. For our pre and post analysis, the main outcome of interest is the change in the means on each of our measures before and after the intervention. As ours is a paired sample, we then test each difference using a paired t-test, to ascertain if it is statistically significant – this is reported next to each result in this chapter. We also present the results a number of other ways to aid interpretation, including providing effect sizes.

The key results are as follows:

- Secondary participants demonstrated statistically significant increases in self-reported ‘performance character’ and confidence: grit increased by 7 per cent, self-efficacy by 9 per cent, problem-solving by 9 per cent, creativity by 8 per cent and locus of control by 5 per cent.
- There were also significant improvements for secondary in character capabilities related to social skills: empathy increased by 8 per cent, communication by 10 per cent, cooperation by 8 per cent and leadership by 9 per cent.
- Secondary participants demonstrated good knowledge retention when tested on the values that were the focus of the programme, with 80 per cent of respondents being able to name four of the five core values of rugby, and over 75 per cent all five.
- There were also statistically significant improvements among primary participants: a 5 per cent reported increase in empathy, a 4 per cent increase in leadership, a 3 per cent increase in self-regulation and a 3 per cent increase in self-efficacy.
- Primary participants said that playing rugby was a source of pride; it encouraged them to expand their horizons and try new things; it made them better at working with others; it helped

develop respect, teamwork, cooperation and resilience and determination, as one put it:

‘It leads up to later life, when you want to get a job. If you play rugby it teaches you to keep calm, like if you get [tagged], it helps to think, “OK I’m fine, carry on”’.

- Large numbers of secondary participants felt the programme had not only improved their character but also their performance at school, with 42 per cent feeling significantly more focused, 46 per cent more confident, and 47 per cent saying it had led to better marks at school (percentages answering 8-10 on a scale where 10 is ‘strongly agree’).
- All teachers surveyed thought the programme had had a positive impact, and the vast majority (95 per cent) also thought that the impact would last for the long-term. When asked more specific questions regarding impact, a majority thought that students were now more focused (75 per cent) and confident (85 per cent), and half of those surveyed also thought it had improved academic results (50 per cent).
- The programme also significantly increased sport participation among both primary and secondary participants: the former saw a 4 per cent increase, while the latter reported a 9 per cent increase in sporting activity, and a 14 per cent increase in activity that raised the breathing rate.

Sample and demographics

The total sample for primary of completed surveys, once pre and post data had been matched, was 1090 participants. The total for secondary was 477 participants. Given the smaller overall number of participants for secondary, this smaller sample is to be expected – however, this may have implications for significance testing at the sub-sample level (or if effects are small). There was limited potential for randomisation in the sample: as all participants during the programme period studied were asked to complete the survey and participants were not randomly recruited to the programme (see appendix 1 for more details).

In terms of gender, the primary sample had a relatively even split of male and female, whereas the secondary sample includes a higher proportion of male to female, as shown in table 2. Some responses were missing these variables, but there are enough, particularly in primary, to conduct sub-group analysis by gender if of interest.

Table 2: Gender breakdown of respondents

	Primary	Secondary
Male	508	231
Female	501	166
Other	N/A	2
Missing	81	78

Results

Primary

For primary, there were a number of statistically significant positive changes to character capabilities reported by participants following the programme. Overall, to the nearest per cent, there was a 5 per cent reported increase in empathy, a 4 per cent increase in leadership, a 3 per cent increase in self-regulation and a 3 per cent increase in self-efficacy. All other results were not significant. Figure 1 presents the findings on character capabilities, while figure 2 presents the percentage change on each measure.

In terms of the other outcomes of interest: there was a statistically significant increase in sport participation, which saw a 4 per cent reported increase overall, although increases in self-reported wellbeing and attitudes to education were not significant. Figure 3 presents the findings for these other outcomes. While there were some differences between male and female respondents in terms of these outcomes, only one was significant – that of self-regulation, which barely changed for female respondents, but increased by 5 per cent for male respondents. Figure 4 presents the percentage change in outcomes, broken down by gender.

Another helpful way of interpreting the results is to review the change in the number of participants reporting high scores on these

measures: between 8 and 10. Figure 5 provides this information for character outcomes, showing that more participants reported high scores across all of these, with a 10 per cent increase in empathy and a 5 per cent increase in both communication and self-efficacy. It is also important to note that while there was an improvement in mean scores across most measures, some individuals exhibited a decrease on these measures, although this doesn't necessarily indicate an effect of participation on individuals. For completeness, we have reported the percentage of pupils showing an increase, decrease and no change respectively (figure 6).

Figure 1: character capabilities compared means for primary participants (* indicates significance at the $p \leq 0.05$ level)

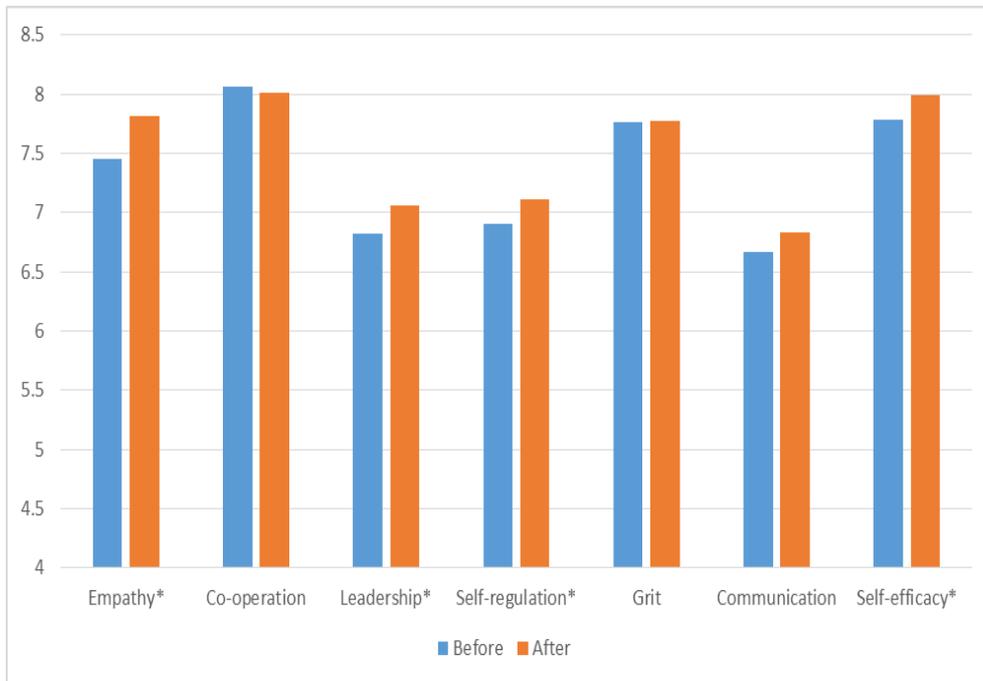


Figure 2: percentage change in the means for character outcomes between pre and post for primary (* indicates significance at the $p \leq 0.05$ level)

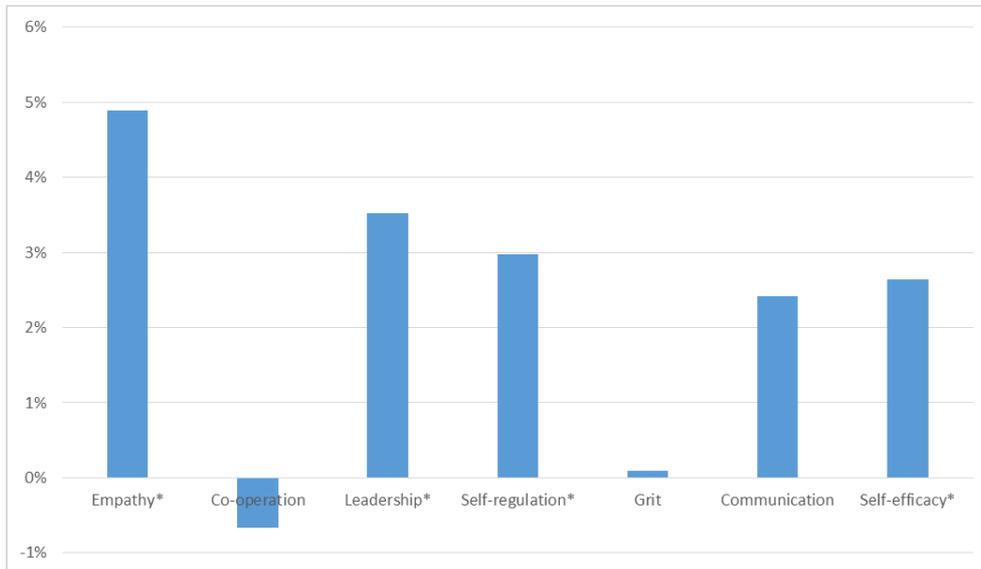


Figure 3: wellbeing, school and sport compared means for primary participants (* indicates significance at the $p \leq 0.05$ level)

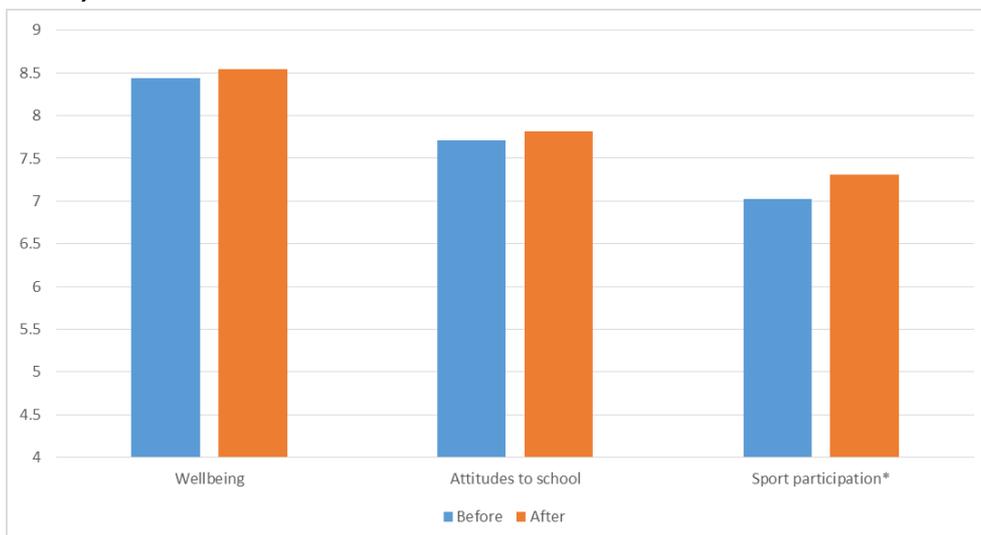


Figure 4: percentage change in the means between pre and post for primary, compared by gender (* indicates significant gender difference at the $p \leq 0.05$ level)

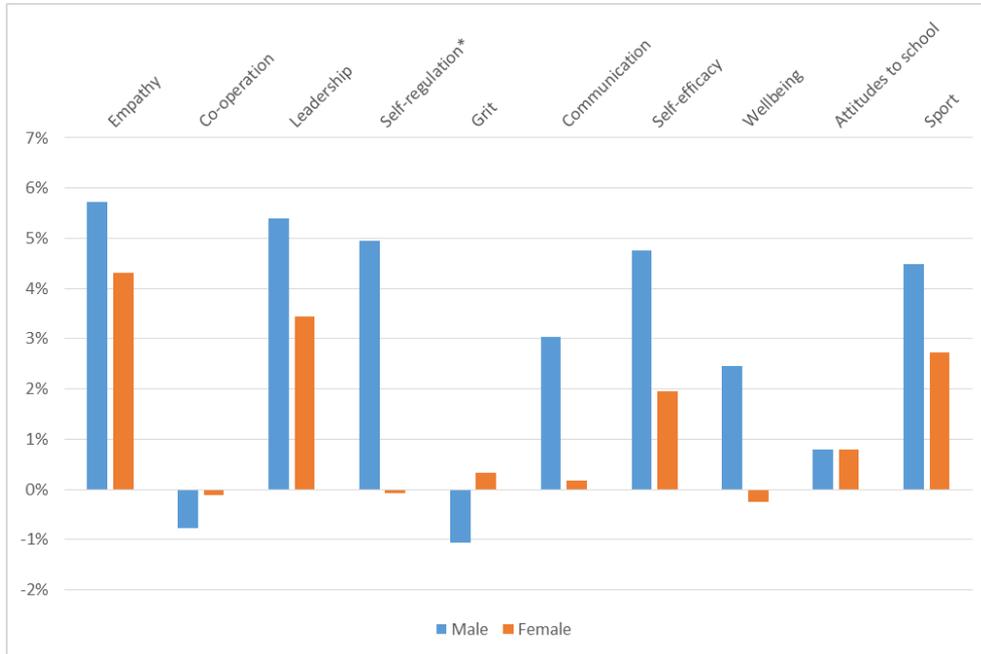


Figure 5: primary respondents reporting scores of 8-10 on character outcomes, pre and post

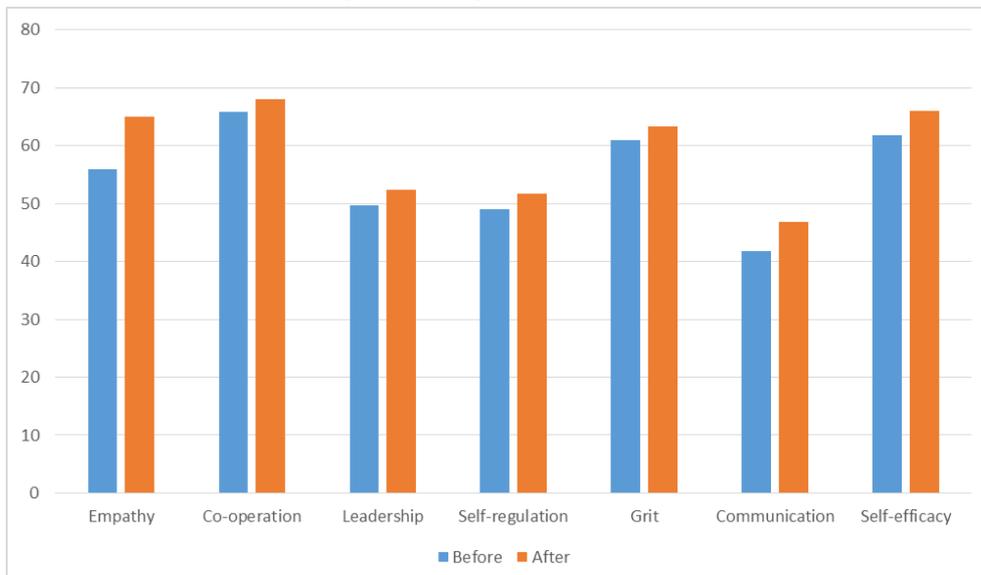
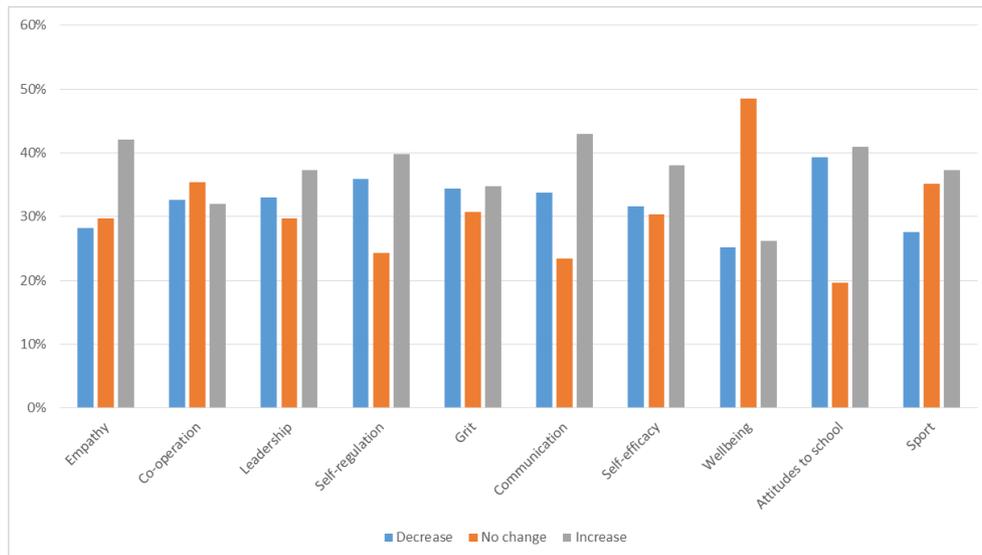


Figure 6: Percentage of pupils showing an increase, decrease or no change on character and other key outcome measures



Another means of interpreting the findings is by calculating an effect size for the outcomes that showed statistically significant increases. This provides a standardised ‘score’ for the size of the difference between two groups, by taking account of variation in the sample, which allows for comparability across evaluations of similar programmes.^{xi}

The most commonly used measure of effect size is known as Cohen’s *d*. However, the standard formula for calculating Cohen’s *d* only applies to two independent groups (such as where a comparison group is present). For a paired samples dataset, we take guidance from Lakens and use his accompanying calculator to report a statistic known as Hedges’ G_{av} , which is designed to be comparable with Cohen’s *d*.^{xii} More detail on the methodology including the formula for this statistic is included in the technical appendix.

We present the effect sizes for those outcomes that demonstrated a statistically significant increase in figure 7. Coe describes an effect of 0.2 as small and 0.5 as medium, although equally states that ‘the effectiveness of a particular intervention can only be interpreted in relation to other interventions that seek to produce the same effect’.

To contextualise our results, we also draw on his examples of effect sizes in educational interventions (these are only one evaluation, not summative of an overall approach), which include:

- Practising test-taking had a positive effect size on test scores of 0.32
- School-based substance abuse education had a positive effect size (ie reduced it) on substance use of 0.12
- Setting students had an overall effect size on student achievement of 0.00, with a positive effect of 0.08 on high-achievers and negative effect of -0.06 on low-achievers

Following the programme, we also asked primary participants to reflect on whether participation itself had had any positive impact on them, both in terms of character capabilities and educational performance. Figure 8 depicts the proportion of respondents answering 8-10 on a scale where 0 means strongly disagree and 10 means strongly agree – it shows that while rugby was a major source of pride for many participants, it also encouraged them to expand their horizons and try new things, important in the forthcoming transition to secondary school. While smaller numbers said it had improved their performance in school, still almost half strongly agreed that it had had a positive impact.

We also asked participants about these wider impacts during our school visits. Some of the primary interviewees said that the element they had learned most from the programme was teamwork. One primary participant mentioned how learning about respect had made him better at working with others:

‘When [we] do group work, you get put in groups with people you don’t usually work with. So you have to work with them, and try and show them that you can work with them properly.’

On a related note, one mentioned that the programme had provided an opportunity to mix with others that they might not normally interact with, and expand their friendship circle:

‘If you play with someone you don’t usually... and get used to playing with them, it’s a good way of being friends with them.’

In terms of the individual benefits, another mentioned that resilience and determination was something they had gained from the programme:

‘It leads up to later life, when you want to get a job. If you play rugby it teaches you to keep calm, like if you get [tagged], it helps to think, “OK I’m fine, carry on”’.

Figure 7: the effect size (Hedges’ G_{av} statistics) for measures which exhibit a statistically significant change

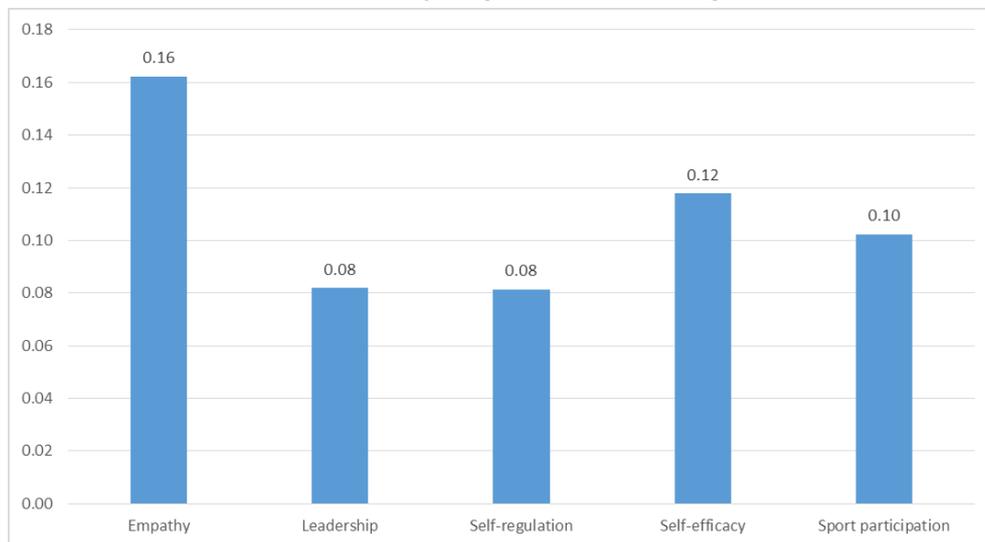
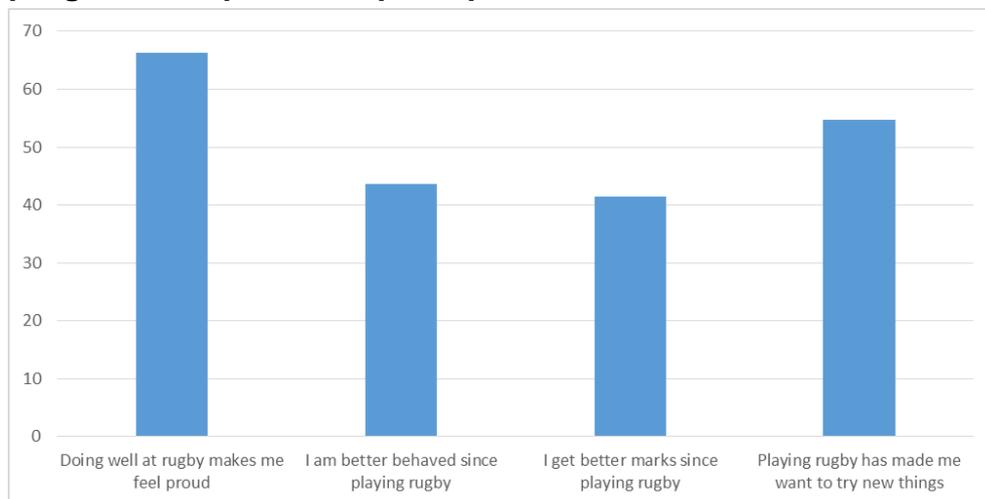


Figure 8: proportion of primary respondents answering 8-10 on programme-specific impact questions



Secondary

The results for secondary participants were impressive, with significant positive reported change across almost every outcome measured. Firstly, across character capabilities associated with performance and problem-solving, there were some substantial increases in self-reported ability (figure 9). Grit, a measure of resilience which incorporates self-regulation and the ability to stick to a task even when the going gets tough, increased by 7 per cent on average. Self-efficacy, reflecting confidence in one's own competence increased by 9 per cent, whereas locus of control, a related measure of whether one feels in control of what happens in life increased by 5 per cent. The two measures related to thinking one's way around a problem – problem-solving and creativity – increased by 9 per cent and 8 per cent respectively.

Secondly, there were also significant increases in those character capabilities related to social skills (figure 10). Empathy, the ability to consider another's feelings and take these into account when acting, increased by 8 per cent. Communication improved by 10 per cent, while cooperation, a measure of team-working skills, increased by 8 per cent. Participants also felt more confident about leading a team following the intervention, with this measure showing a 9 per cent increase on average. Figure 11 presents the percentage change in the means on all of the character outcomes measured.

When broken down by gender, there were some noticeable differences between males and females in terms of reported change (figure 12). Female participants reported much higher improvements in terms of co-operation and grit, whereas boys reported stronger increases in self-efficacy. At the sub-group level only one of these was found to be statistically significant – the difference in reported improvement in co-operation. As with primary we also analysed the change in participants responding 8-10 across our character measures (figure 13). This found large increases in participants' confidence in their grit, problem-solving, creativity and cooperation.

Across the other three outcome measures the results were more mixed. While participants reported significant increases in wellbeing and sport participation, they actually reported less positive (and statistically significant) attitudes to education following the intervention. While reported sport participation increased by 12 per cent and wellbeing by 6 per cent, positive sentiment to education decreased by 6 per cent. This could be for a number of reasons – however, on reviewing the data, we believe the most likely explanation is methodological, relating to how these particular questions were asked.

In order to encourage participants to read the questions carefully, we included three questions that were to be reverse-coded in the analysis, i.e. were negative statements, in which a high score would represent a strong negative opinion. Two of these reverse coded questions were included alongside a regularly coded question in the educational attitudes scale. Participants in fact report a statistically significant positive change in the regularly coded question (I work hard at school) or 6 per cent. The same is true of the third reverse coded question, one of four making up the wellbeing measure – if it is excluded, then wellbeing following the intervention increases by 10 rather than 6 per cent. In interpreting these results it is important to bear these methodological considerations, alongside others detailed in appendix 1, in mind.

As in the primary results, we also report the percentage of pupils experience a decrease, increase and no change in key character outcomes and other measures (figure 14), as well as Hedges' G_{av} statistics for each of the statistically significant measures (figure 15). Generally speaking, the effect was larger among secondary school pupils than those in primary school.

Figure 9: performance character capabilities compared means for secondary participants (* indicates significance at the $p \leq 0.05$ level)

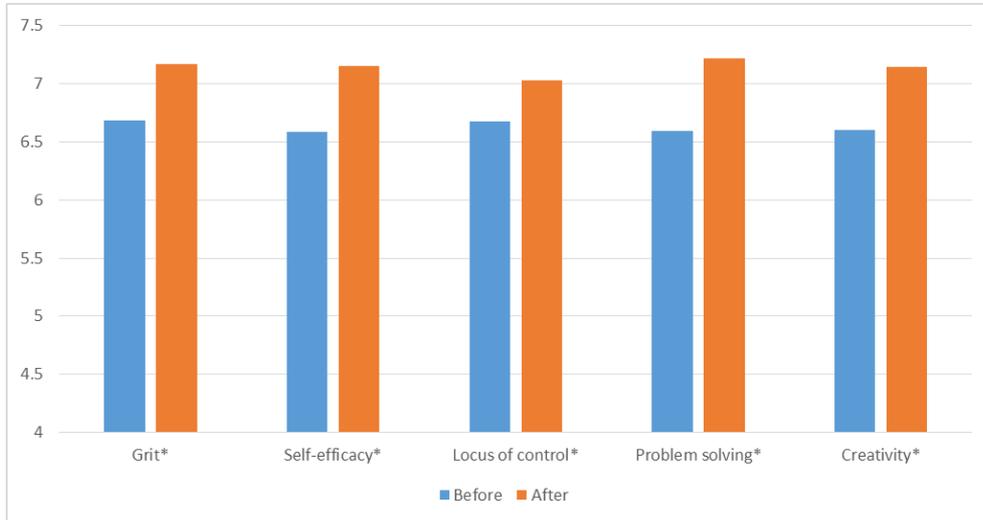


Figure 10: social character capabilities compared means for secondary participants (* indicates significance at the $p \leq 0.05$ level)

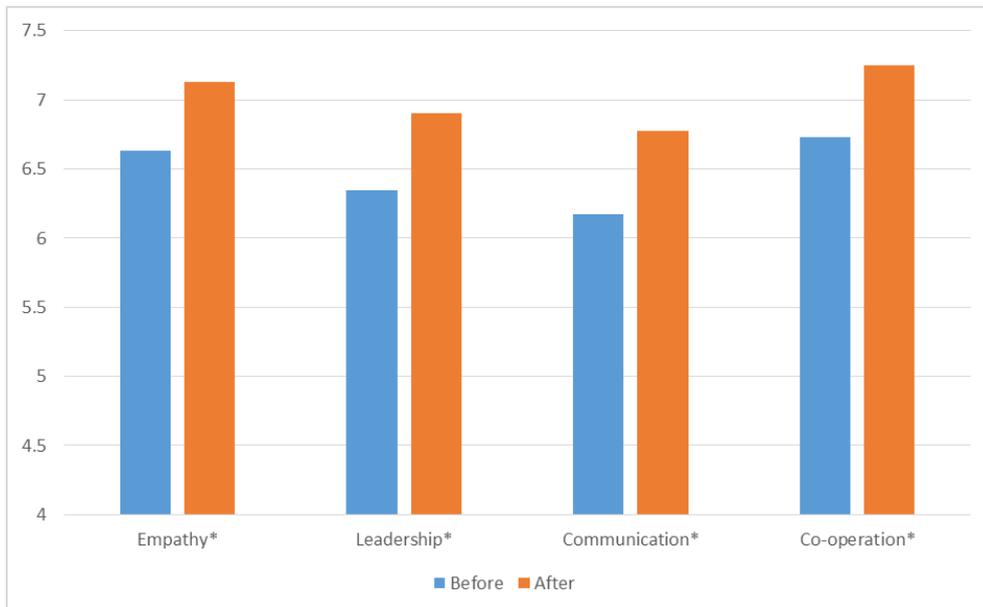


Figure 11: percentage change in the means for character outcomes between pre and post for secondary (* indicates significance at the $p \leq 0.05$ level)

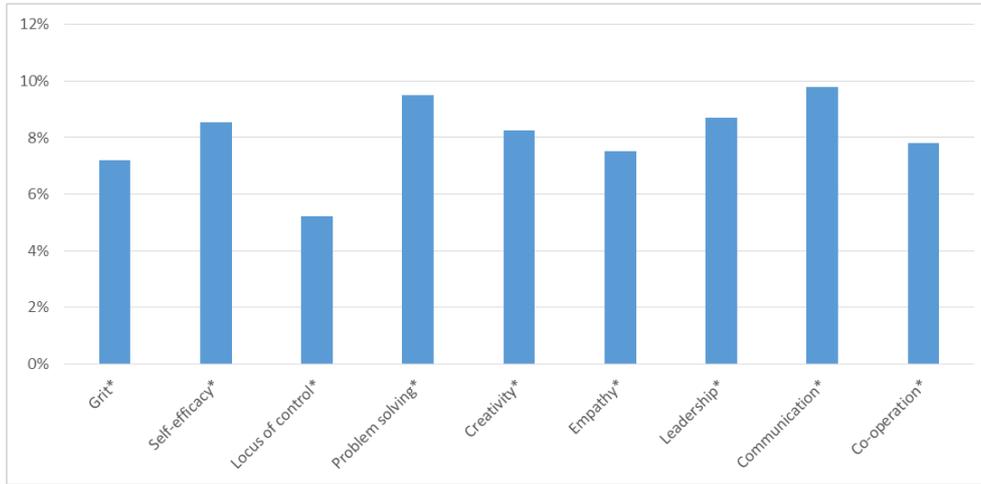


Figure 12: percentage change in the means for secondary, compared by gender (* indicates significant gender difference at the $p \leq 0.05$ level)

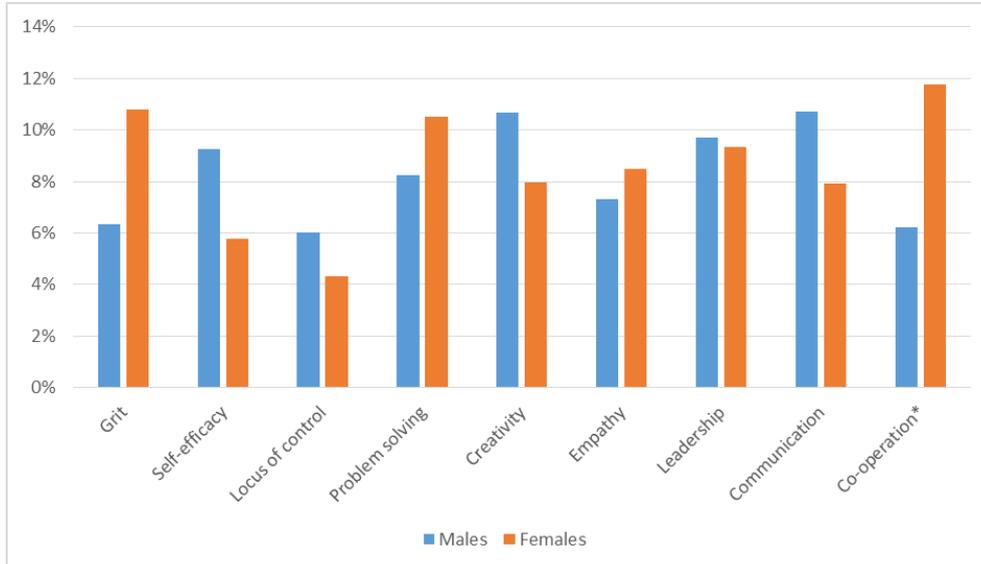


Figure 13: secondary respondents reporting scores of 8-10 on character outcomes, pre and post

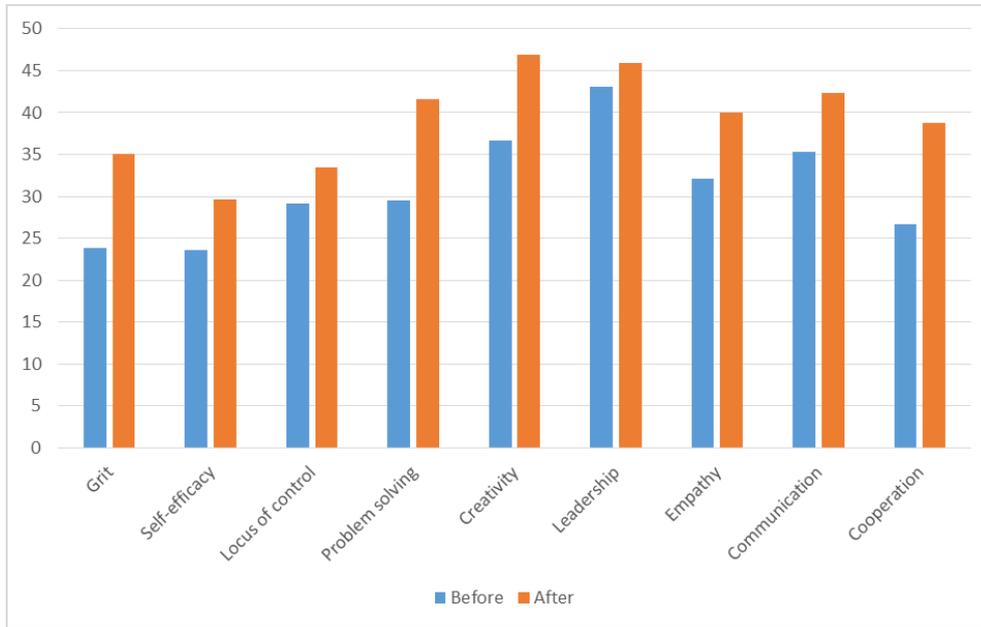


Figure 14: Percentage of pupils showing an increase, decrease or no change on character outcomes

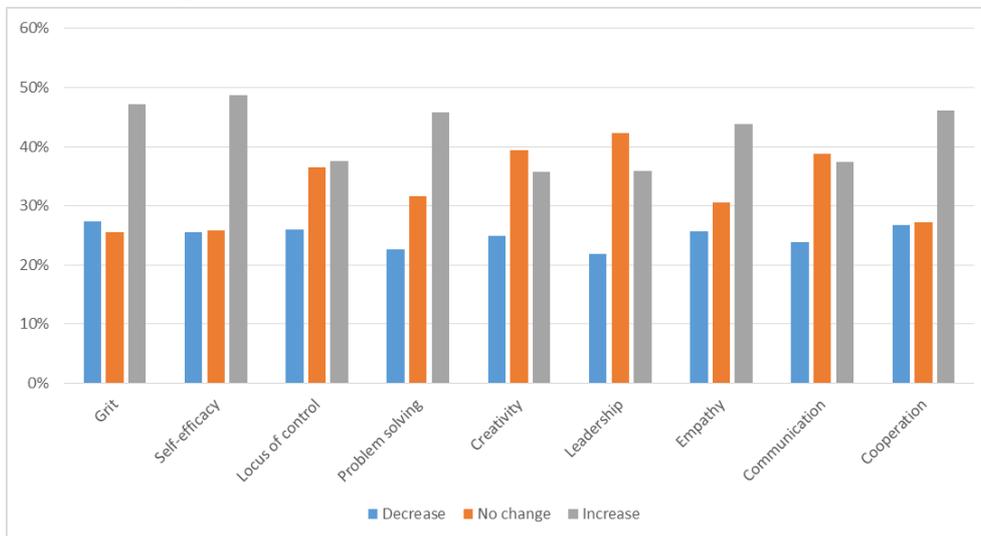
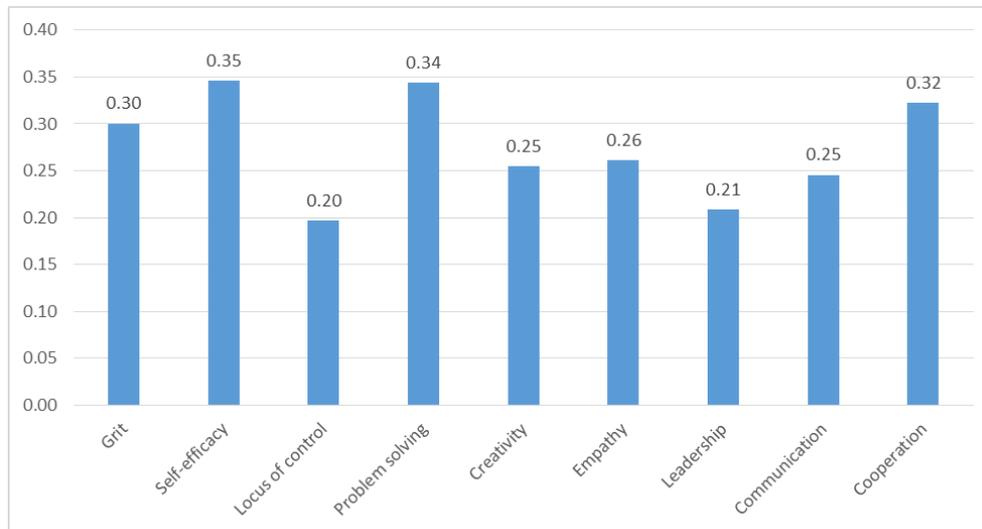


Figure 15: effect size (Hedges' G_{av} statistics) for character outcomes that exhibit a statistically significant change



In the questionnaire, we also asked a more sophisticated question related to sporting activity, modelled on Sport England's Active People survey. As such, we asked not only whether they had participated in sport in the last four weeks, but also whether that participation had raised their breathing rate. As figure 16 shows, there were significant increases on both measures, with a reported average 9 per cent increase in sporting activity, and a 14 per cent increase in activity that raised the breathing rate, demonstrating that respondents had increased their levels of meaningful physical activity through the programme.

We asked secondary participants to name as many of the five values of rugby, the core academic content of the programme, as they could remember, to test the knowledge gained over the course of the programme. Over 80 per cent of respondents were able to name each of four of the five values, and over 75 per cent all five (figure 17). The least well-remembered value was Enjoyment, possibly because it was usually the value that was focused on during the first session of delivery, or that it was something that the participants took for granted.

When asked about the values of rugby during our school visit, secondary participants were able to describe them with some accuracy, speaking about ‘discipline, and the rules of rugby, and how it would be with or without rules’, as well as ‘team-work’, and ‘respect’, which covered respecting the referee and self-respect. The participants all felt that they had been thinking more about these themes whilst they were playing rugby or other sports and one spoke about this in relation to the taught value of team-work:

‘It’s better, when you’re thinking of [teamwork] – say you’ve got the ball, and you pass the ball to your teammate, they’ll pass to someone else, they’ll pass back to you, and it’s easier to score. You accomplish it easier.’

There were also good levels of recall of the values among the primary participants that we interviewed during the school visits we made, with one group naming all five and the other group naming the four they had learned up to that point in the programme. They were also able to talk about these values in some detail, describing ‘respect’ variously as respecting another’s opinions, ‘being kind to one another’ and caring about somebody else. One also pupil mentioned the importance of respecting one’s teammates, saying ‘you might not even like your teammates, but you still have to respect them.’

We also asked participants directly whether the programme had had any impact on their characteristics: whether they were more focused, or confident, or open to new experiences; or better behaved or more successful academically; or if they had been thinking about the programme’s values in other contexts. Figure 18 depicts the number of respondents reporting scores of 8-10 on a scale where 0 is strongly disagree and 10 strongly agree – showing that significant numbers of participants felt it had not only improved their character but also their performance at school.

Figure 16: sporting activity before and after participation in the programme

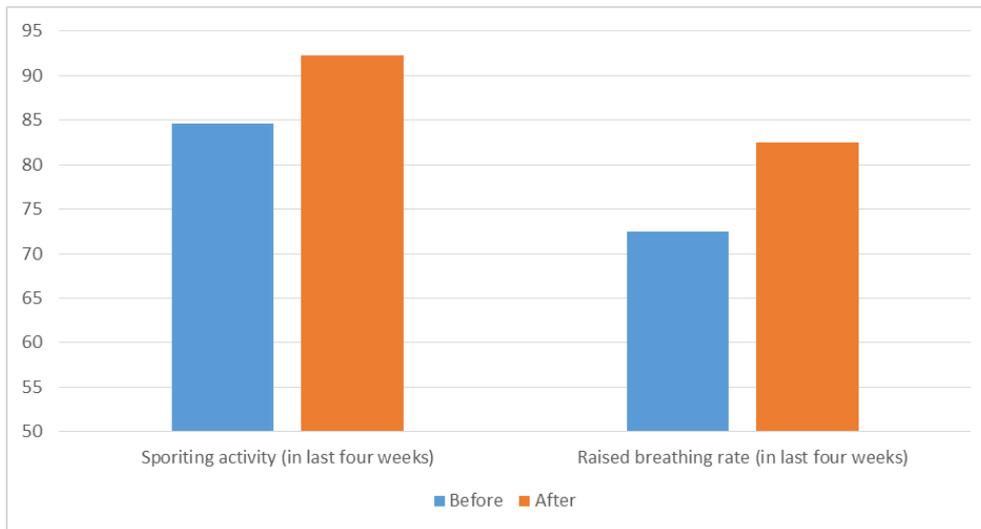


Figure 17: knowledge retention of the five values of rugby immediately post-programme

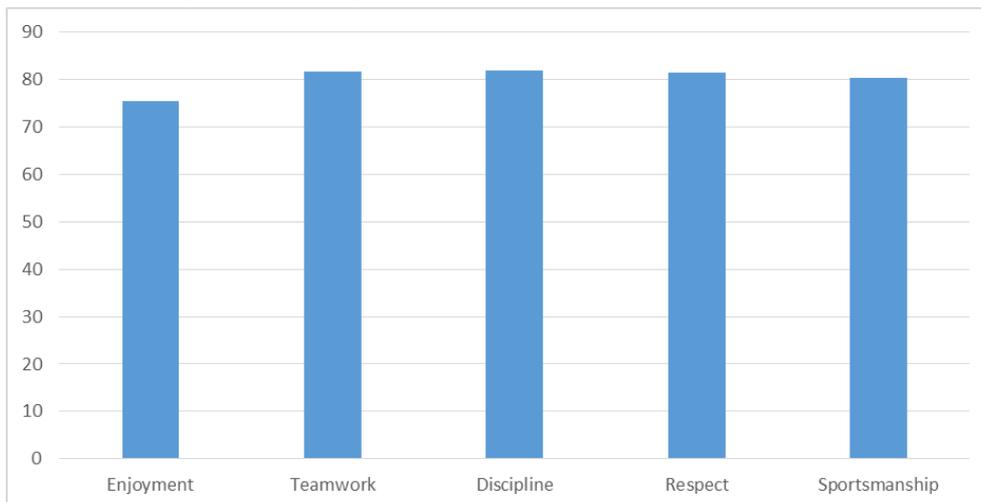
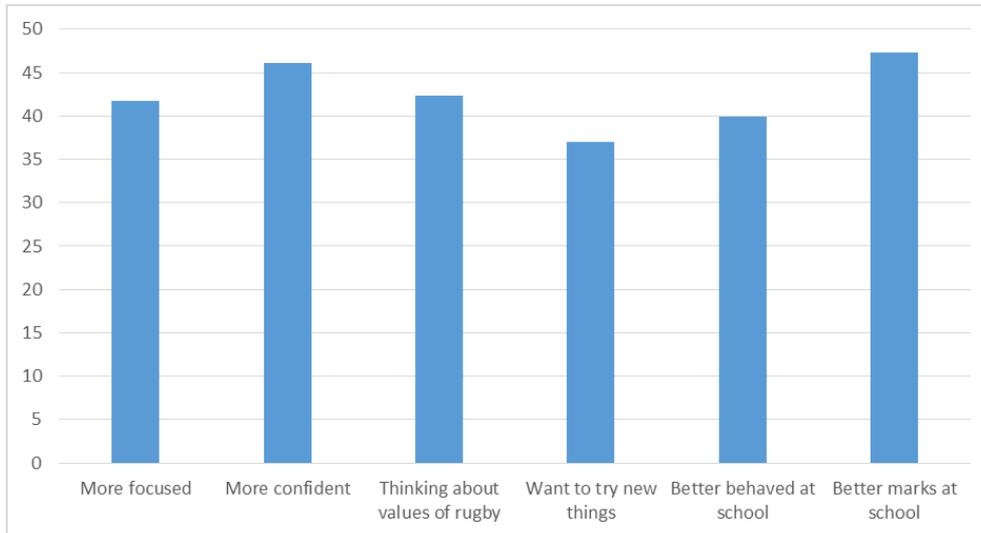


Figure 18: proportion of secondary respondents answering 8-10 on programme-specific impact questions



Finally, we undertook a survey of 20 teachers whose students had participated in the programme – 130 during the project period under study, and 550 in total throughout the whole project. The sample was small and self-selecting and therefore these results should be treated as indicative. However, it was notable that all the teachers surveyed thought the programme had had a positive impact, and the vast majority also thought that the impact would last for the long-term (figure 19). When asked more specific questions regarding impact, a majority thought that students were now more focused and confident, and half of those surveyed also thought it had improved academic results (figure 20).

Figure 19: teachers' views on the impact of the programme on their students

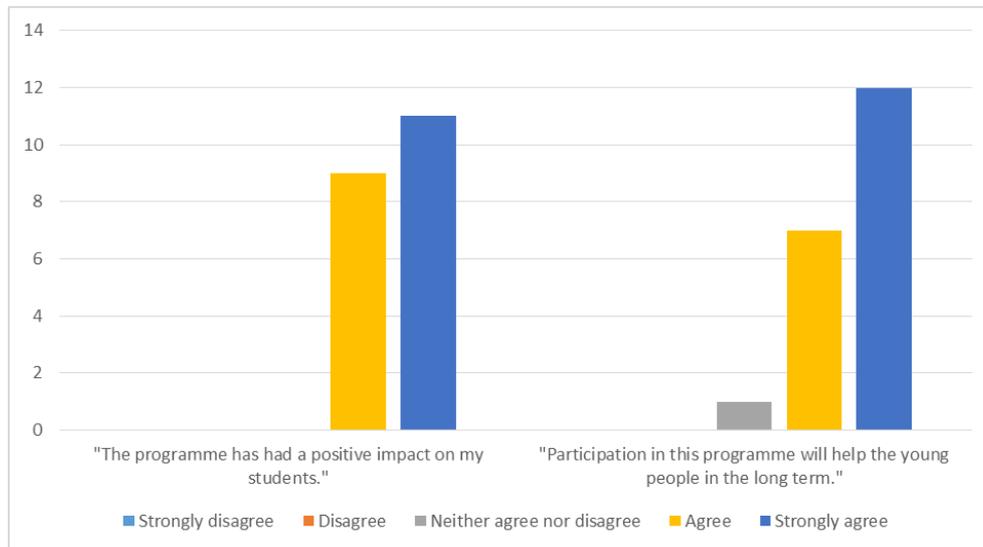
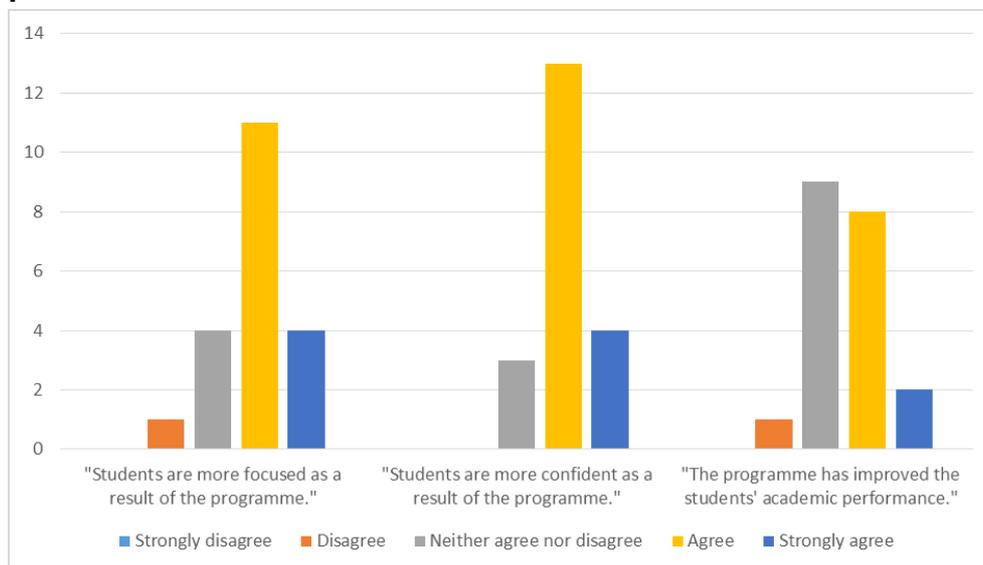


Figure 20: teachers' views on the impact of the programme on students' focus, confidence and academic performance



We also spoke to coaches delivering at the three schools we visited, who mentioned particular examples of character improvements which they attributed to the programme. For example, one

mentioned that teaching students about respect had improved communication and empathy in their interactions:

'I think you certainly see good communication – pupils speaking to each other in the right way, in a respectful way – obviously respect was one of the key themes. We've really emphasised that throughout the programme, and especially in the later sessions we were seeing fewer arguments, children being polite to each other, saying their pleases and thank yous, and playing games where they were respecting the rules and not cheating.'

One coach also said that teachers had mentioned medium-term improvements in behaviour and engagement amongst a group of students with additional behavioural needs:

'There were always some behavioural issues... A couple of the schools that I went to, I went back to a different year group a couple of weeks later, and the teachers openly said the work we had done with those groups had changed not necessarily everyone, but had definitely transformed one or two individuals.'

PROCESS FINDINGS

The research team also undertook a series of activities in order to evaluate the success of the project implementation, what worked well and less well about the project, and what could be improved. These included three visits to participating schools to observe a session in action (two primaries and one secondary school), interviews with participants, teachers and coaches during these visits, process questions in the post-intervention survey completed by participants, and an online survey of teachers in participating schools. This chapter summarises the findings of these activities.

The key findings were as follows:

- The majority of participants in the programme who were surveyed enjoyed participating (71 per cent for primary, 63 per cent for secondary), wanted to keep playing rugby (62 per cent for primary, 54 per cent for secondary), and would recommend it to another (54 per cent for secondary).
- All of the teachers involved in the programme who were surveyed said that they enjoyed participating in the programme, the programme was a good use of school time, that their school should do things like On the Front Foot, and that they would recommend it to another school.
- The practical, sport participation element of the programme was cited as a highlight by our respondents, though most also valued the classroom aspect and could see how one improved the other.
- In addition to the impressive number who remember the core values in the survey (75 per cent could name all five values), many of those interviewed during our school visits had picked up the values of the programme and some said they had reflected on them outside of the programme, in other sports, school, and other aspects of their lives.
- The involvement of professional coaches, whose connection to a local club improved engagement, was referenced by participants

and teachers at each of the three schools we visited as being important to the programme's success.

- Teachers were unanimous in saying that the programme did not demand too much of them.
- Areas for improvement include the transition between theory and practical components, the overall length of sessions (considered by some to be too long in primary delivery), and potential for continuing links with the club or teacher delivery following the end of the programme.

Participants

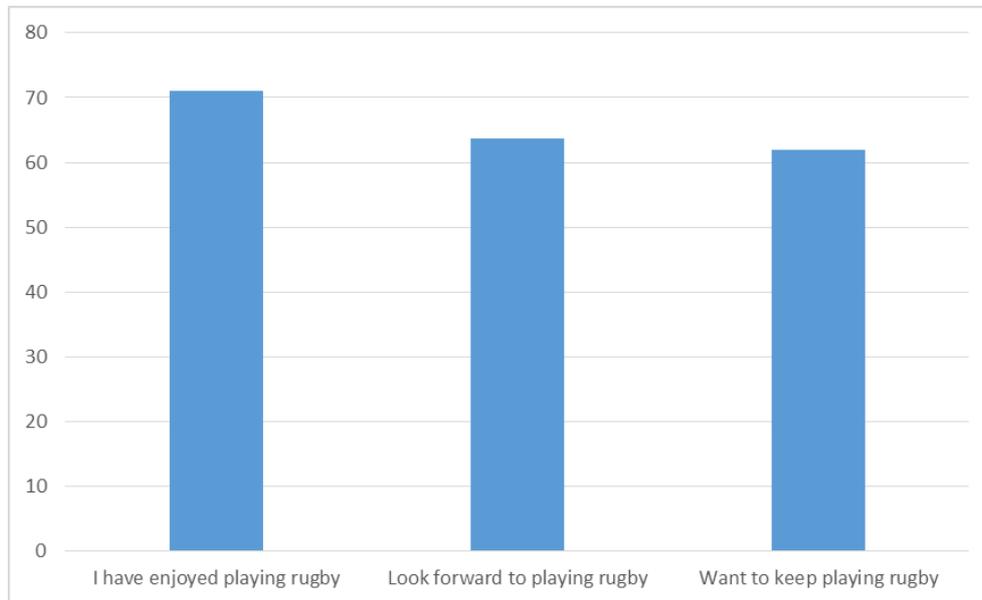
Overall, participants were very positive about the programme. When asked in our post-programme survey, over 70 per cent of primary participants said that they had enjoyed playing rugby – answering between 8-10 where 10 was strongly agree. There were similar majorities when asked whether they looked forward to playing rugby each week (64 per cent), and whether they wanted to continue playing (62 per cent, figure 21).

This positivity was reflected in the discussions we had with participants during the visits to primary schools. While participants said they enjoyed the whole programme, with one describing it as '[some] of the most fun' of all classroom activities they had participated in at school, there was particular favourability towards the practical, outdoor activities. This was reflected in our session observations, with levels of enjoyment but also focus being high during the practical component and participants needing more frequent reminders to keep on task during the classroom sessions.

However, participants did feel that the classroom learning aspect complemented the sport participation and was improving their rugby and their approach to school more generally. Another pupil elaborated: 'We learn about stuff like respect and discipline, and the games are based on the [values]. So you apply a particular [value] to outside as well as inside.' One felt that he was learning 'what it's like

as a rugby player’ so that ‘by the time you get outside ... you know what to do.’

Figure 21: primary participants’ responses to programme satisfaction questions



The link to outdoor activities seemed to encourage engagement in the classroom: participants said that with other subjects, ‘you just want to get it done with so that you can go out and play. But for this, you like doing it’, and said that ‘it goes so quickly you don’t even realise it’. They also highlighted the importance of enjoyment – both in practice and as a value: they emphasised that ‘you have to enjoy the game’, and ‘if you don’t have fun you’re just going to be down all the time and think “I can’t wait to finish”’. The pupils also spoke positively of having the professional coaches rather than school teachers delivering the sessions – ‘they’re more experienced and we’re hearing all about it. The teachers aren’t used to teaching rugby.’

When asked what they might improve: participants at one school said that they would like to change the way the groups are decided, so that they could be with their friends – although it’s worth noting that encouraging them to mix with others was a potential benefit of the programme. Another primary group suggested that the

transition to the outside activity could slow down the sessions, and said they would like to ‘do more activities inside and not just outside’. Finally, the participants interviewed were unanimous said that they would recommend the programme to their friends – one interviewee said ‘I have a neighbour, and I’ve told her that it’s really really fun’.

Secondary participants were similarly positive about the programme overall, if marginally less so, with majorities reporting strong agreement that they had enjoyed the programme (63 per cent) and wanting to keep playing rugby (54 per cent). We also asked whether they would recommend the programme to a friend, and a good majority of 54 per cent of respondents answered in the affirmative, giving an answer between 8 and 10 on our scale (figure 22).

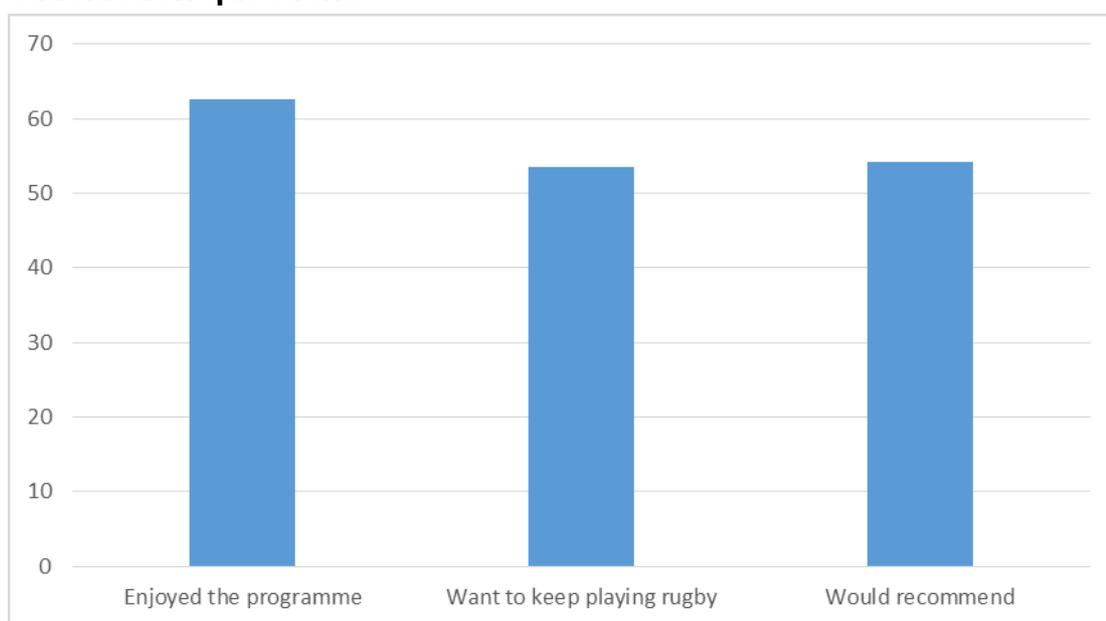
The secondary participants that we interviewed during our school visit spoke positively about the programme, and agreed that they would want to continue with it. The interviewees identified the outside practical sessions as having been the part that they had enjoyed the most – ‘we all prefer the bit outside’, but felt that the theory sessions aided this enjoyment, because ‘you know what you’re doing’. One participant said: ‘I liked doing the practicals because it got me out of the class and I could actually do some sport’.

When asked whether participating in the programme as part of a mixed group had changed how they viewed other pupils, for example those in other year groups and in other classes, participants said they did not feel that it had. This was illustrated to some extent by the fact that all the students said they had stayed in the same friendship groups as before. However, their teachers noted more rapport and less antagonistic behaviour within the group, and those who had previously been reserved coming more out of their shell during the course of the programme (see box 1).

One pupil explained how the programme had changed his opinion of rugby for the better, as he said: ‘before we started I didn’t like rugby, I’ve been asked to join a rugby team and I said no. But now I

would join it.’ The pupils also felt that they would play more sports in future as a result of the programme, ‘because you enjoy sports a little bit more than you did before’.

Figure 22: secondary participants’ responses to programme satisfaction questions



Box 1: case study, secondary school in East Midlands

The research team observed a session taking place in a large secondary school in a city in the East Midlands. The participating group was comprised of 12 year 9s and 10s of mixed genders, all of whom had been identified as having an additional need – for some this was behavioural difficulties whereas for others it was a matter of social skills or low self-esteem, and some students had SEN or LAC status. At the school, the programme had been implemented to act as an intervention to aid academic performance for certain pupils. Delivery took place in a specialist behavioural unit, where the coach was supported by two members of staff – the head of the unit (a teacher) and a behaviour mentor. It was the final session and the value under study was Sportsmanship.

Overall, students seemed to be enjoying the programme and were particularly engaged during the practical session. All wanted to

continue participating and some had sought out other opportunities to participate in sport in future. In interviews, the teachers and the coach mentioned how far the group had come over the course of the programme, citing examples of problematic behaviour flaring up in previous sessions, however all were broadly well-behaved during the session and seemed to really relish the opportunity.

The behaviour mentor described the progress of various students: 'one of my students has got really weak social skills, and he has really come on. He's really starting to interact more with the other students.' She described another participant 'can be a bit challenging', but who has 'been a good team player' during the programme.

She provided a further example of an incident that had arisen during a session, but had been dealt with by another student:

'It was interesting because it was a really heated moment for a minute, and then it defused really quickly, and then they were back on the pitch and playing ... The one that was starting the fight apologised ... and they just got on with it, even though they'd had that bit of a scuffle, they still carried on playing and were working OK together.'

As the students participating had a high level of need, during the classroom session they did need regular reminders to keep on track. The fact that the session was highly instructed and content-filled helped with their engagement, as did the coach's and school staff's competence at behaviour management. The coach made sure to set out the value under study clearly through direct instruction and other media and encouraged participants to contribute and demonstrate their knowledge through exercises including asking participants to set their own goals over the next few weeks.

In the practical session they were very good at keeping on task. All of the participants were focused on the game and quickly reacted to the coach's feedback and occasional rule changes. At the beginning of the session they were told to referee their own behaviour and they did so successfully throughout, with no misbehaviour, and

honesty around turnovers, tackles and tries. While both parts of the session seemed well structured, the transition from classroom delivery to outdoor activity was less so, with some students finishing early and distracting their peers – which led to an element of conflict and behaviour issues.

In terms of differentiation, students had different needs but all seemed to be engaged with both aspects of the delivery, with the coach making sure that everyone was participating and encouraged regardless of ability. The behaviour mentor commented: ‘I was impressed with the girls – I was worried about the girls because it’s rugby, a man’s sport. And the girls have done really well.’ In the future she mentioned her ambition for girls-only rugby programme at the school.

The school staff were positive about the programme, with the behaviour mentor saying: ‘I’ve been really impressed. The coach is really good – he’s one of the best coaches I’ve seen come in and work with students. He’s consistent, he’s calm, he challenges the negative behaviour in a really positive way.’ She went on to say: ‘I’ve not actually seen anything that hasn’t worked. I can’t see anything wrong with the programme.’ They would also gladly do the programme again and recommend it to another school. They mentioned that the relative brevity of the programme was a strength as ‘[the participants] get bored if it drags on, so it’s better if it’s quick’. The interviewees felt that the practical and theory elements worked well together, with the head of the unit commenting that there had been no issues with students turning up only for the practical component.

In terms of improvements to the programme, both interviewees suggested that asking participants to produce something physical at the end of the programme, such as a poster, advice card, or ‘pro-formas that they fill in with a bit of their own added personal input’ would provide a greater sense of achievement and help convert their experiences on the programme into employability skills. The head of the unit suggested that this could tie in with literacy and numeracy.

He also mentioned that while participants had demonstrated improved classroom behaviour in the theory sessions of the programme, this hadn't translated into their other subject work in school. He suggested that his next step would be learning from and building on the programme to secure good behaviour from participants more widely in their school career. The research team observed a session taking place in a large secondary school in a city in the East Midlands. The participating group was comprised of 12 year 9s and 10s of mixed genders, all of whom had been identified as having an additional need – for some this was behavioural difficulties whereas for others it was a matter of social skills or low self-esteem, and some students had SEN or LAC status. At the school, the programme had been implemented to act as an intervention to aid academic performance for certain pupils. Delivery took place in a specialist behavioural unit, where the coach was supported by two members of staff – the head of the unit (a teacher) and a behaviour mentor. It was the final session and the value under study was Sportsmanship.

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Teachers

To understand the attitudes of teachers involved in delivery, we undertook an online survey of teachers in primary and secondary schools which had participated in the programme, distributed to schools by participating clubs as a Survey Monkey link. We received 20 responses, which were self-selecting, and so as mentioned previously the results should be treated as indicative.

The teachers who responded were very positive about the programme. Figure 23 demonstrates that 100 per cent of respondents enjoyed their participation in the programme, and all of the respondents also said they would recommend it to another school. This was reflected in the first of our open response questions, asking them to describe their experience of the programme in their own words:

'Clearly enjoyed by the children taking part. Teaching life skills, such as anger management, in addition to rugby. Great!'

'It was an excellent and well-structured programme. The coaches worked tirelessly with the students whilst developing their rugby skills with fun and engaging activities. I recommend this programme highly to any schools/colleges.'

'This was a fantastic programme that all the children engaged with by the end. At first, some pupils were reluctant to join in but over the weeks they grew in confidence and were able to participate fully. The children were enthusiastic and engaged and looked forward to their practical rugby sessions each week. I also like how the classroom sessions tied in with the core values and promoted these.'

We also asked three questions about the programme in the context of their school, in which participant teachers were again very positive about the programme. All of the teachers surveyed thought the programme was a good use of their school's time and that their school should do more activities like On the Front Foot (figure 24). The majority also said they thought they had been well-supported by their school throughout the delivery period. We asked a further question to get a sense of whether the workload demands of the programme were too onerous, and 100 per cent of our respondents said that they thought the time commitment required was 'about right', as opposed to either too much or too little.

When asked what they thought the best aspect of the project was, many teachers mentioned the practical sessions and game-playing as a real highlight, although others also mentioned the classroom sessions and how the two interacted. Some mentioned that the

approach meant that those who might not normally participate in sport could get involved: ‘Gave the children the chance to experience a different sport and engaged children, who are normally reluctant to join in PE lessons.’

Figure 23: teachers’ satisfaction with the programme overall

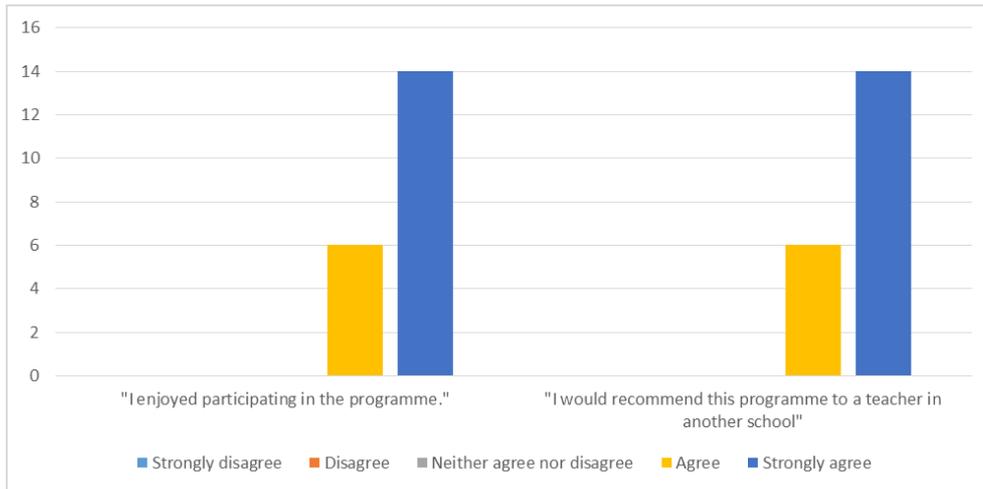
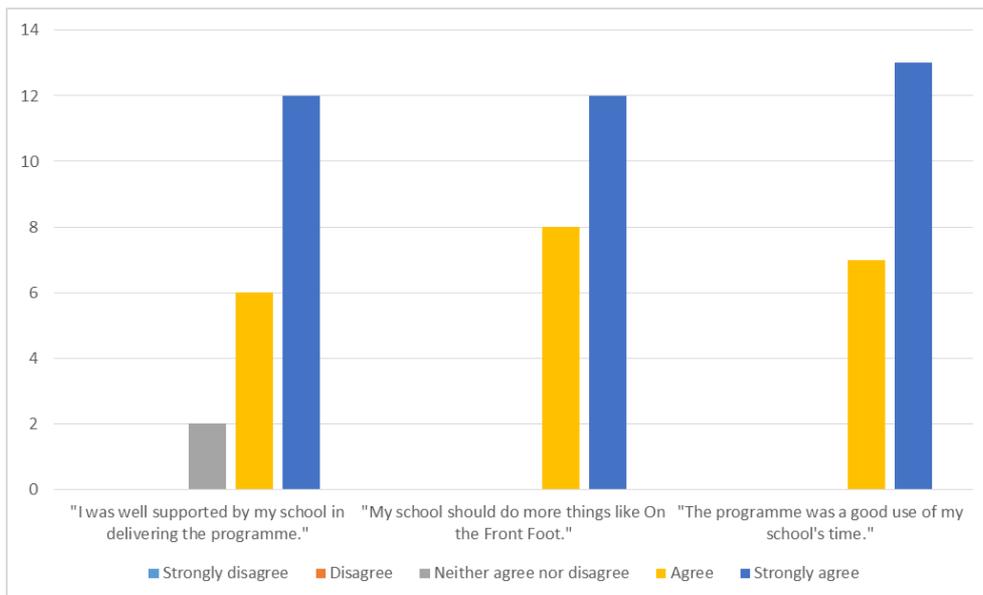


Figure 24: teachers’ views of the programme in the context of their school



Others mentioned the importance of the involvement of professional coaches with a link to a Premiership Rugby team, citing visits from the clubs themselves as particularly inspiring. Some said the best aspect was the potential for role-modelling from coaches, who have an authentic voice that teachers might not and therefore could positively influence the young people. There was also a suggestion of the wider benefits that came from the programme, with one respondent referencing the implications of the programme for the young people's character being their favourite aspect:

'The children learning about the ethos of rugby, thinking about how playing the game in a certain way can transfer to how they treat/respect people in other areas of their lives.'

Others mentioned wider benefits for the school, including the additional support meaning they could focus attention on particular groups, and the potential training benefits for teachers of observing professional coaches and assisting with delivery:

'I am not confident at teaching Y6 PE, so for the children to experience top quality PE, led by excellent coaches, is great. As the class teacher, I also learnt a lot about teaching tag rugby. So it can also be considered as a CPD opportunity for teachers too.'

This also came up during our school visits, where one member of staff explained that observing the programme had aided her work as a behaviour mentor, as she has been able to 'see the real students coming out.' She elaborated:

'When I'm sitting down mentoring one-to-one, sometimes you're not getting the full picture. Whereas when you're seeing them out, and interacting with other students, you can get a bigger picture. It really does help in the mentoring role.'

We also asked our respondents to name the worst aspect of the programme in their view, and what they might change about the programme. While many didn't have any criticism and couldn't suggest any room for improvement, some wanted the programme to go on for longer than six sessions, and others requested clearer

means for continued participation in rugby outside of the programme. Another respondent mentioned that a clearer transition or a break between the two sessions might improve delivery – a point that was also noted during our session observations. And one respondent made a request for resources to be distributed to schools so that they could reinforce the programme and continue delivery after it had finished:

‘Cards of activities e.g. warm ups and games completed during the sessions for the staff to keep as visual reminders of how to teach the skills in the future and to allow for consolidation between sessions.’

Fortunately this will be possible following the pilot period, as Premiership Rugby will make the project resources available via their website.

Another theme in terms of difficulties with implementation was external pressures such as timetabling and the need to achieve results with exam classes as having an impact on delivery. This was also the main thrust of feedback when asked whether they thought there would be difficulties scaling up the programme, and delivering in other settings, where there were concerns that the school would be able to dedicate enough time to the programme in their timetable, particularly around exam time. However, the majority of teachers though that the programme was scalable, not seeing any major barriers to delivery in other schools. As one put it: ‘If it can be successfully delivered in our setting with the risks and challenges we have I would say it could be delivered in any school.’

Finally, in a strong endorsement of their experience, a number of respondents expressed a strong desire to undertake the programme again:

‘I would appreciate the programme coming back to the school.’

‘Great leaders, great enthusiasm, great resource which should be available every year!’

‘Can we do it again :-) ?’

Coaches

We also spoke to coaches who had been delivering the programme in each of the three schools we visited to understand their views on the programme. Overall, they were positive about the programme, with all three considering it a success, being happy to deliver it again, and thinking it was something that could take place in any kind of school. One respondent was particularly positive about it, saying: ‘I think it’s been more successful than any other programme’. Others said that while they found it stretching, that was because it was trying to achieve something relatively difficult: ‘it’s not as easy to deliver as some other things, but it’s important and I think it’s effective in trying to develop character’.

All the coaches thought the six-week programme was an effective period of time for delivering the programme. In terms of session length, one mentioned that sometimes it was difficult to fit all the content into the allocated time period: ‘there’s a lot of content there, and we looked at how we could fit that into effectively 45 a minute session, because you never get a full hour with them, due to school staff, and them getting settled.’

In terms of what worked well, one of our coaches mentioned particularly the sessions on discipline and respect, while another thought delivery was at its strongest when the values could be linked to the practice of rugby or the participants’ everyday lives:

‘The teamwork week is obviously one where you can draw some very obvious comparisons between what happens in rugby, and what happens in the children’s day-to-day lives.’

They all thought that both the classroom and practical aspects worked well, although felt that the former sometimes required more effort to ensure that the students were remaining engaged and enjoyed it throughout. One said that sometimes it was important not to labour the link between the two – and therefore to allow the practical session to embody the values rather than ‘teach’ it per se. Not all the coaches we spoke to had experience teaching in classrooms, and indeed one had a mixed experience of their own classroom learning when at school – and so were glad to be able to

adapt the session so that they could draw on their own examples and be confident in the material.

There was further scope for adaptation, with the coaches tweaking the programme to suit it to the school and particular class they were working with. For some this meant adjusting the timing of the sessions – ‘for the secondary school pupils, I tended to start with the respect week, because that’s the one that stuck with them’ – for others it meant using different examples or placing a stronger focus on particular values, sometimes in strategic consultation with the school staff themselves:

‘We met all the schools we deliver the programme to, and we asked “what are the key areas out of 6, which one would you most like to have a main focus on? Or three out of them which would have a stronger focus?”’

All of the coaches interviewed also reported that teachers had mentioned to them the benefit of having representatives from a professional club delivering the programme. One summarised it as follows:

‘What you get from having us in there is it’s a different voice, it’s someone who’s coming in [wearing] their club tracksuit – automatically the kids are more engaged because they think “it’s somebody from [club]”, and they’re excited about that and want to listen.’

They also mentioned that they had seen positive impact on participants throughout the course of delivery, including students getting more engaged in school, in sport (including joining rugby teams outside of school) and reflecting on the programme content in later sessions.

‘Towards the end weeks, you can see in the practical sessions [participants] thinking “am I showing some team-work?”. I saw some fantastic examples of them showing respect towards each other in some of the tag rugby games we were playing. I think that’s a direct [effect of] us emphasising and discussing why it’s important to show respect and discipline.’

One said that this positive impact was also being reported to them by the teachers, with the participants demonstrating peer reinforcement:

“The teachers notice it, especially in the last few weeks, they’re saying “this situation happened; this is how they resolved it, because you guys have been talking about it.””

DISCUSSION

What do these findings mean, both in terms of the relative success of the programme and more broadly, for policy making and school practice? This section briefly reflects on these findings in context, drawing lessons for future research.

First, it is worth returning to our research question for the impact evaluation, which was informed by the overall objectives of the DfE's Character Grant:

What impact does participation in On the Front Foot, a six-week education programme based on the core values of rugby, have on character outcomes for primary and secondary participants?

Based on this new evaluative evidence, it appears that, on average, participants experienced a significant impact on their character capabilities over the course of the programme. This was particularly the case for secondary participants, who reported positive change across every character measure that we assessed, although there were many positive outcomes for primary participants too. This leads us to conclude that it is possible for rugby-based education programmes to develop various character capabilities in participants – including those associated with performance, problem-solving, leadership and social skills – as assessed through self-reported psychometric measures. Given the number of young people who participated in the programme and the average improvements in character capabilities reported by them, it is therefore clear the programme has achieved its objectives.

A second point is that the programme appears to have been broadly successful in terms of implementation. The majority of participants, teachers and coaches involved with delivery that we spoke to were very happy with the programme and seemed to be keen for it to continue. The sessions observed were of good quality across various settings and students seemed to particularly value the involvement of external experts in the form of professional coaches, with a link to the local club. However, our process evaluation did reveal scope for improvement: the transition between the classroom and the rugby pitch could be better managed, and teachers wanted more

potential for continuing links with the club following the end of the programme, or making use of the resources themselves.

Unsurprisingly, this pilot evaluation is not the last word on the question of whether participating in rugby helps to develop character. While these initial results are promising, there is plenty of potential for future research in this area – in the first instance repeating the programme evaluation but with the inclusion of a comparison group and the introduction of systematic randomisation, so as to isolate the effect of the programme on the development of character capabilities and begin to establish a causal link. Future evaluations could also observe a wider range of outcomes, such as school attendance, behaviour and attainment, in order to understand the interrelationship between participation, development of character and school outcomes.

The question as to whether primary respondents reported less positive change overall as a result of the programme, the method of evaluating change (as the instrument was adapted for use with primary) or just something unique to primary participants remains open, but could be investigated through using alternative evaluation instruments or making alterations to the primary programme and re-testing. Isolating components within the programme would also help understand its impact and inform education policy and practice: for example analysing the relative contribution of the theoretical, classroom sessions and the practical, sporting elements, perhaps by delivering the two independently and assessing the impact. This could help to illuminate to what extent the impact of the programme differs from a purely rugby-based intervention, and therefore the importance of the value-based classroom sessions.

Further research could also identify how the impact of a character intervention structured around rugby differs from those of another sport, and again from a physical activity intervention, or from an outdoor adventure intervention, or a purely classroom based activity. Based on the observations conducted as part of this evaluation, it seems important that there is differentiation within the activities that develop character: while a particularly tough maths problem or a game of chess may develop the resilience and

problem-solving skills of one student, another may better develop those capabilities through participating in sport or other physical activity. Theoretically, it is possible that the fact that team sport combines physical activity (requiring resilience) with rules (requiring self-regulation) and cooperation with team-mates (requiring social skills) is what leads it to be character-building across these domains. The unique contribution of rugby may therefore relate to its core values and the potential to embody those on the field of play – though all of these questions remain to be tested by future research.

A final question of pressing interest to policy-makers is: how effective is this when compared to other similar programmes? For this reason we have calculated effect sizes in the hope that future evaluators will begin to do the same for character education interventions, and the EEF beginning to evaluate character outcomes and providing guidance on instruments will also aid the robustness and comparability of evaluations in this area.

In summary, this study is an initial contribution to the evidence base on sport participation and character development, demonstrating that participation in a rugby programme is associated with a positive self-reported change in character capabilities. These findings are timely, given the recent Education white paper's plans for a dedicated budget for extra-curricular activities in 25 per cent of schools, partly with a view to developing character. Our suggestion is that in allocating these funds, the Department makes clear what ends it wants the activity to work towards in terms of character development, and that it and participating schools learn from the burgeoning evidence base in seeking to achieve them. This will ensure that the new opportunities presented to young people are of the highest quality and thereby help England on its way to being a world-leader in character education.

APPENDIX 1: TECHNICAL APPENDIX

This appendix provides further information on the approach to the evaluation, with a particular focus on how the impact findings were derived and calculated.

Respondents

The surveys were administered in hard copy by coaches during the first and last delivery sessions with each group, and were then tabulated and returned to Demos for analysis. Some clubs provided more returns than others, leaving the sample open to bias. Table 3 lays out the matched returns for primary and secondary by club. Table 4 lays out the matched returns for primary and secondary by year group.

Table 3: Respondent breakdown by club

	Primary	Secondary
Bath	148	52
Leicester	111	10
London Irish	154	156
London Welsh	127	N/A
Newcastle	79	9
Northampton	39	86
Sale	61	78
Saracens	93	32
Wasps	248	40
Worcester	30	14

Table 4: Respondent breakdown by year group

Primary	
Year 5	503
Year 5/6	3
Year 6	414
Missing	170
Secondary	
Year 8	1
Year 9	123
Year 10	82
Year 11	23
Missing	248

Indicators

In the primary school analysis, key indicators of character capabilities, as well as wellbeing and sport, are based on responses to single questions. The only exception is attitudes to school, which is based on the mean score on two questions. In the secondary school analysis, these indicators are based on a mix of individual questions and mean scores for two or more questions. Full question mapping linking questions to outcomes indicators is set in tables 5 and 6.

Table 5: Primary survey question mapping

Question	Outcome
I Feel bad when somebody gets their feelings hurt	Empathy
I take part lots of sport	Sport
I feel comfortable being a group leader	Leadership
I find it easy to concentrate	Self-regulation
I carry on trying even if I find something difficult	Grit
I am good at explaining my ideas to other people	Communication
I can do most things if I try	Self-efficacy
I like being the way I am	Wellbeing
I enjoy working with together with other people	Co-operation
I am happy when I am at school	Attitudes to school
I work as hard as I can at school	Attitudes to school

Table 6: Secondary survey question mapping

Question	Outcome
I feel responsible for my actions	Locus of control
If someone is not a success in life it's usually their own fault	Locus of control
I am a hard worker	Grit
I can continue to work on things despite distractions	Grit
Once I have started a task, I like to finish it	Grit
If something goes wrong I am able to bounce back and carry on	Grit
I am able to compromise and resolve differences of opinion	Cooperation
I can work with someone who has different opinions to me	Cooperation
I enjoy working together with other students my age	Cooperation
I try to understand what other people go through	Empathy
I feel bad when somebody gets their feelings hurt	Empathy
I feel able to have an impact on the world around me	Self-efficacy
I am confident about having a go at things that are new to me	Self-efficacy
I can do most things if I try	Self-efficacy
Most of the time I don't want to go to school (reverse coded)	Attitudes to school
I work hard when I am at school	Attitudes to school
I'm not interested in doing any more learning (reverse coded)	Attitudes to school
I know where to go for help with a problem	Problem-solving
I can work out my problems	Problem-solving
I often figure out different ways of doing things	Creativity
I am confident about explaining my ideas clearly	Communication
I take part in lots of sport	Sport
Overall, how satisfied are you with your life nowadays?	Wellbeing
Overall, how happy did you feel yesterday?	Wellbeing
Overall, to what extent do you feel that things in your life are worthwhile?	Wellbeing
Overall, how <u>anxious</u> did you feel yesterday? (reverse coded)	Wellbeing

Significance testing

Paired samples t-tests were performed on each of the outcomes listed above. This is a comparison of mean differences between matched pairs of observations, in this case between before and after programme responses by the same pupil. It estimates the probability that the programme had no effect on pupils' scores (i.e. that the average difference is zero). We can reject the null hypothesis of no effect at the 95% confidence level if the p-value of the resulting t-statistic is less than or equal to 0.05. Full results are set out in tables 7-10.

Table 7: Paired t-test results (primary)

Outcome	Empathy	Sport	Leadership	Self-regulation	Grit
Before	7.45	7.02	6.82	6.91	7.77
After	7.82	7.31	7.06	7.11	7.77
Difference	0.36	0.29	0.24	0.21	0.01
% increase	4.89%	4.06%	3.52%	2.98%	0.10%
SD before	2.34	2.84	3.00	2.61	2.28
SD after	2.15	2.73	2.86	2.44	2.15
T-statistic	4.91	3.99	2.79	2.64	0.10
Sample size	1083	1083	1082	1084	1080
P-value of ttest	<0.0001	0.0001	0.0054	0.0084	0.9180
Outcome	Comms	Self-efficacy	Wellbeing	Co-operation	Attitudes to school
Before	6.67	7.79	8.44	8.07	7.71
After	6.83	7.99	8.55	8.01	7.81
Difference	0.16	0.21	0.11	-0.05	0.11
% increase	2.42%	2.64%	1.27%	-0.66%	1.37%
SD before	2.58	2.32	2.32	3.34	1.92
SD after	2.62	2.11	2.07	2.26	1.84
T-statistic	1.86	3.35	1.44	-0.51	1.84
Sample size	1083	1078	1079	1083	1078
P-value of ttest	0.0634	0.0322	0.1512	0.6084	0.0653

Three important caveats should be attached to this analysis. First, the reverse coded questions in the secondary questionnaires seem to have caused some problems for participants. The frequency distribution of results is fairly similar across most measures, with most respondents opting for higher scores. It is not possible to determine whether it is simply coincidence that the three measures that were reverse coded were also those that participants felt the least positive about, or whether some pupils were just putting high scores for every response without engaging with the question. However, these results should be interpreted with this in mind.

Second, gender information was missing for whole clubs: for Sale within the secondary data, and for Newcastle within the primary data. This makes some of the gender splits in the data somewhat counter-intuitive. For example, in total 29 per cent of secondary pupils had high (8-10) scores for the locus of control measure. However, the figures for boys was just 20 per cent, and 25 per cent for girls. This is because pupils from Sale had, on average, higher scores for this measure.

Table 8: Paired t-test results (secondary)

Outcome	Locus of control	Grit	Co-operation	Empathy	Self-efficacy	Attitudes to school
Before	6.68	6.69	6.73	6.63	6.59	5.07
After	7.03	7.17	7.25	7.13	7.15	4.79
Difference	0.35	0.48	0.52	0.50	0.56	-0.29
% increase	5%	7%	8%	8%	9%	-6%
SD before	1.83	1.67	1.72	1.95	1.64	1.91
SD after	1.71	1.52	1.52	1.85	1.62	1.85
T-statistic	4.21	7.03	6.63	5.60	7.36	-3.87
Sample size	471	465	468	468	466	468
P-value of t-statistic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Significant at 95%	yes	yes	yes	yes	yes	yes

Outcome	Problem solving	Creativity	Communication	Sport	Wellbeing	Leadership
Before	6.59	6.60	6.17	6.27	6.17	6.35
After	7.22	7.15	6.77	7.04	6.54	6.90
Difference	0.63	0.55	0.60	0.77	0.37	0.55
% increase	9%	8%	10%	12%	6%	9%
SD before	1.88	2.21	2.51	2.88	1.62	2.79
SD after	1.74	2.05	2.40	2.57	1.74	2.49
T-statistic	7.39	4.85	5.21	6.62	7.98	4.77
Sample size	465	475	475	473	468	476

Third, it is important to note that participation in the programme, and inclusion in the evaluation, does not meet the criterion of random selection. Clubs chose the schools that took part in the programme, in some cases based on pre-existing relationships, alongside aiming to deliver the programme in more deprived areas. Schools then chose the classes that would participate. In the case of secondary schools, in some cases students were deliberately chosen because they had particular behavioural needs. Similarly, all pupils were requested to participate in the evaluation surveys, yet not all returned the same number of results. While there is no reason to believe that the absence of random selection in this evaluation has skewed the results in any particular direction, random sample selection is an important assumption behind inferential statistics, and the findings in this report should be interpreted accordingly.

Table 9: Independent samples t-test results by gender for primary

Outcome	Empathy	Sport	Leadership	Self-regulation	Grit
Males	0.405567	0.33002	0.376494	0.328032	-0.08383
Females	0.336673	0.182365	0.230461	-0.006	0.026104
Difference	0.068893	0.147655	0.146033	0.334032	-0.10994
SD males	2.723392	2.396552	2.920723	2.831551	2.60633
SD females	2.289946	2.366264	2.861774	2.397804	2.216029
F-statistic	1.4144	1.0258	1.0416	1.3945	1.3833
P-value of F-statistic	0.0001	0.7763	0.6489	0.0002	0.0003
T-test type	Welch	Standard	Standard	Welch	Welch
T-statistic	0.4335	0.9813	0.7989	2.0165	-0.7184
Male sample size	503	503	502	503	501
Female sample size	499	499	499	500	498
P-value of ttest	0.6647	0.3267	0.4245	0.0440	0.4727
Outcome	Comms	Self-efficacy	Wellbeing	Co-operation	Attitudes to school
Males	0.205179	0.36473	0.206	-0.06175	0.06012
Females	0.012	0.154309	-0.02209	-0.01	0.072289
Difference	0.193179	0.210421	0.228088	-0.05175	-0.01217
SD males	2.980933	2.769462	2.683648	2.777542	2.02281
SD females	2.881747	2.445847	2.360284	2.304892	1.828072
F-statistic	1.07	1.2821	1.2928	1.4522	1.2244
P-value of F-statistic	0.4496	0.0056	0.0042	<0.0001	0.0242
T-test type	Standard	Welch	Welch	Welch	Welch
T-statistic	1.0428	1.2722	1.4258	-0.321	-0.0997
Male sample size	502	499	500	502	499
Female sample size	500	499	498	500	498
P-value of ttest	0.2973	0.2036	0.1542	0.7483	0.9206

Table 10: Independent samples t-test results by gender for secondary

Outcome	Locus of control	Grit	Co-operation	Empathy	Self-efficacy	Attitudes to school
Males	0.38	0.40	0.40	0.45	0.58	-0.26
Females	0.29	0.71	0.77	0.59	0.39	-0.42
Difference	0.09	-0.30	-0.36	-0.14	0.19	0.16
SD Males	1.74	1.56	1.70	1.93	1.73	1.69
SD Females	2.02	1.53	1.82	1.97	1.61	1.63
F-statistic	0.74	1.04	0.87	0.96	1.15	1.07
P-value of F-statistic	0.0400	0.7848	0.3267	0.7950	0.3461	0.6682
T-test type	Welch	Standard	Standard	Standard	Standard	Standard
T-statistic	0.47	-1.89	-2.01	-0.70	1.10	0.91
Male sample size	230	227	230	229	227	228
Female sample size	161	158	158	159	159	160
P-value of t-statistic	0.6369	0.0595	0.0449	0.4821	0.2723	0.3630
Outcome	Problem solving	Creativity	Communication	Sport	Wellbeing	Leadership
Males	0.53	0.67	0.64	0.90	0.48	0.57
Females	0.69	0.52	0.49	0.90	0.39	0.58
Difference	-0.16	0.15	0.15	0.00	0.09	-0.01
SD Males	1.83	2.41	2.52	2.58	1.54	2.48
SD Females	1.96	2.64	2.50	2.66	1.58	3.01
F-statistic	0.87	0.83	1.02	0.94	0.94	0.68
P-value of F-statistic	0.3230	0.1990	0.9105	0.6766	0.6828	0.0074
T-test type	Standard	Standard	Standard	Standard	Standard	Welch
T-statistic	-0.80	0.60	0.58	0.01	0.58	-0.03
Male sample size	226	230	231	231	226	231
Female sample size	159	165	164	162	162	165
P-value of t-statistic	0.4220	0.5516	0.5622	0.9895	0.5600	0.9758

Effect Size

Lakens' 2013 guide sets out when various effect size measures should be used.^{xiii} With correlated samples comparisons, the standardized mean difference effect size for within-subject designs is Cohen's d_z and variants Cohen's d_{rm} (which accounts for the correlation between matched pairs) and Cohen's d_{av} (which takes an average of the standard deviation of the two groups). The difference between the three statistics is small: Lakens claims that when Pearson's r is larger than 0.5, d_z is larger than d_{rm} and d_{av} , and smaller when r is smaller than 0.5. Lakens then goes on to argue that these statistics are positively biased, and recommends applying Hedges' correction, and then using either Hedges' g_{av} or Hedges' g_{rm} based on whichever value is closest to Cohen's d in a between-subject design, in order to report an effect size that is comparable across methodologies.

The formula for Cohen's d_{av} is as follows, where M_{diff} is the difference between paired means, and SD_1 is the standard deviation among pre-programme responses, and SD_2 is the standard deviation among post-programme responses:

$$d_{av} = \frac{M_{diff}}{\sqrt{\frac{SD_1^2 + SD_2^2}{2}}}$$

Hedges' correction applies as follows:

$$g_{av} = d_{av} \left(1 - \left(\frac{3}{4(n-1) - 1} \right) \right)$$

For the sake of completeness, we report all the effect size scores in tables 11 and 12.

Table 11: Effect sizes (primary)

Effect size statistic	Cohen's d_z	Cohen's d_{rm}	Hedges g_{rm}	Cohen's d_{av}	Hedges g_{av}
Empathy	0.149	0.162	0.162	0.162	0.162
Leadership	0.085	0.082	0.082	0.082	0.082
Self-regulation	0.080	0.081	0.081	0.081	0.081
Self-efficacy	0.102	0.118	0.118	0.118	0.118
Sport participation	0.121	0.102	0.102	0.102	0.102

Table 12: Effect sizes (secondary)

Effect size statistic	Cohen's d_z	Cohen's d_{rm}	Hedges g_{rm}	Cohen's d_{av}	Hedges g_{av}
Grit	0.326	0.300	0.300	0.301	0.300
Self-efficacy	0.341	0.346	0.346	0.346	0.346
Locus of control	0.194	0.197	0.196	0.197	0.197
Problem solving	0.343	0.344	0.344	0.345	0.344
Creativity	0.222	0.255	0.255	0.255	0.255
Empathy	0.259	0.262	0.261	0.262	0.262
Leadership	0.219	0.208	0.208	0.209	0.208
Communication	0.239	0.246	0.245	0.246	0.246
Cooperation	0.306	0.322	0.322	0.323	0.323
Attitudes to school	0.179	0.152	0.152	0.152	0.152
Wellbeing	0.245	0.234	0.233	0.235	0.235
Sport	0.305	0.281	0.281	0.283	0.282

APPENDIX 2: PRIMARY POST-SURVEY

Primary Survey

This is a survey to find out about your views on things that are important to young people. The things you tell us won't be shared with anyone else, and we won't put your name in anything we write.

There are no right or wrong answers. We just want you to tell us what you think.

Please ask your teacher if you have any questions. Thank you for helping us.

1. What is your first name?

2. What is your surname?

3. Are you a boy or girl?

Boy

Girl

4. What year group are you in?

5. What school do you go to?

6. Please tell us how much you **agree** with the following statements. There is a scale where 0 = “not at all true” and 10 = “completely true”.

Tick only **one** box on each line.

Not at all true  Completely true

	0	1	2	3	4	5	6	7	8	9	10
I feel bad when somebody gets their feelings hurt											
I am happy when I am at school											
I take part in lots of sport											
I feel comfortable being a group leader											
I find it easy to concentrate											
I carry on trying even if I find something difficult											
I am good at explaining my ideas to other people											
I can do most things if I try											
I work as hard as I can in school											
I like being the way I am											
I enjoy working together with other people											

7. Now we want to know about the rugby project you have been taking part in.

Please tell us how much you **agree** with the following statements. There is a scale where 0 = “not at all true” and 10 = “completely true”.

Tick only **one** box on each line.

Not at all true  Completely true

	0	1	2	3	4	5	6	7	8	9	10
I have enjoyed playing rugby											
Doing well at rugby makes me feel proud											
I am better behaved at school since playing rugby											
I look forward to playing rugby every week											
I get better marks at school since playing rugby											
Playing rugby has made me want to try new things											
I want to keep playing rugby											

Thank you very much for taking the time to complete this survey. Please return this survey and if you have any questions please ask.

APPENDIX 3: SECONDARY POST-SURVEY

Secondary Survey

This is a survey to find out about your views on things that are important to young people. The things you tell us won't be shared with anyone else, and we won't put your name in anything we write.

There are no right or wrong answers. We just want you to tell us what you think.

Please ask your teacher if you have any questions. Thank you for helping us.

1. What is your first name?

2. What is your surname?

3. Are you:

Female

Male

Other/prefer not to say

4. What year group are you in?

5. What school do you go to?

6. Please tell us how **true** the following statements are about you. There is a scale where 0 = “not at all true” and 10 = “completely true”.

Tick only **one** box on each line.

Not at all true  Completely true

	0	1	2	3	4	5	6	7	8	9	10
Once I have started a task, I like to finish it											
I enjoy working together with other students my age											
I feel bad when somebody gets their feelings hurt											
I can do most things if I try											
I often figure out different ways of doing things											
I am a hard worker											
I am confident about explaining my ideas clearly											
I can work out my problems											
If something goes wrong I am able to bounce back and carry on											
Most of the time I don't want to go to school											
I take part in lots of sport											
I feel comfortable being a group leader											

7. Please tell us how much you **agree or disagree** with the following statements. There is a scale where 0 = “completely disagree” and 10 = “completely agree”. Tick only **one** box on each line.

Completely disagree  Completely agree

	0	1	2	3	4	5	6	7	8	9	10
I feel responsible for my actions											
I can continue to work on things despite distractions											
I am able to compromise and resolve differences of opinion											
I try to understand what other people go through											
I feel able to have an impact on the world around me											
I work hard when I am at school											
I know where to go for help with a problem											
I can work with someone who has different opinions to me											
I am confident about having a go at things that are new to me											
I'm not interested in doing any more learning											
If someone is not a success in life it's usually their own fault											

8. Now we'd like to ask you some questions about how you feel about different aspects of your life.

For each of these questions there is a scale where 0 = "not at all" and 10 = "completely". Tick only **one** box on each line.

Not at all  Completely

	0	1	2	3	4	5	6	7	8	9	10
Overall, how satisfied are you with your life nowadays?											
Overall, how happy did you feel yesterday?											
Overall, to what extent do you feel that things in your life are worthwhile?											
Overall, how <u>anxious</u> did you feel yesterday?											

9. Thinking about the last four weeks, did you do any sporting or recreational physical activity?

This could include things like cycling, going to the gym, going for long walks, dance classes or playing sports. Please tick only **one** box.

- Yes No Don't know

10. And during the last four weeks, was the effort you put into usually enough to raise your breathing rate? Please tick only **one** box.

- Yes No Don't know

11. Now we want to know your views about On the Front Foot, the rugby project you have been taking part in.

Please tell us how much you **agree** with the following statements. There is a scale where 0 = “not at all true” and 10 = “completely true”.

Tick only **one** box on each line.

Not at all true

Completely true

	0	1	2	3	4	5	6	7	8	9	10
I have enjoyed the On the Front Foot programme											
I am more focused as a result of the programme											
I am better behaved at school since taking part in the programme											
I have found myself thinking about the programme’s values											
Participating in the programme has made me more confident											
I get better marks at school since playing rugby											
The programme has made me want to try new things											
I want to keep playing rugby											
I would recommend the programme to a friend											

12. Finally, Premiership Rugby has five core values which were described during the course of the programme. How many of them can you name?

Please write your answers on the line below, using a separate line for each answer. Don't worry if you can't remember but please do not check your answers with a friend or classmate.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Thank you very much for taking the time to complete this survey. Please return this survey and if you have any questions please ask.

APPENDIX 4: OBSERVATION FRAMEWORK

The observation will focus on the relation between the individual session and the overall objectives of the programme, and session design. This framework has been modified to focus on the session and not the general classroom situation. It is a general guide for qualitative evaluation, rather than a check list or assessment tool.

Session aspects	Observations	Questions
Environmental aspects	Task-orientation / atmosphere	Do the pupils need regular reminders to keep on track?
	Session structure	Is a clear structure adhered to in delivery?
	Resources	Are all the required resources available?
	Vocabulary	Use of key words (values of rugby, character terms) clear and instructive.
Learning habits	Learning objectives	Are the objectives of the session clearly articulated?
	Session purpose	How accurately and explicitly are the values or Premiership Rugby / character traits articulated?
	Success criteria	How clearly are the criteria for success explained to pupils? How effectively are successes celebrated?
	Recall	To what extent is the learning of previous sessions recalled?
	Differentiation	To what extent are parts of the session differentiated?
	Cross-curricular linkage	Are links between the session and the classroom in general articulated?
	Delivery and Management	Knowledge

	Modelling	Do delivery staff model and demonstrate what they want the pupils to achieve?
	Structure	Is the lesson well structured? Does the session overrun / is there insufficient time?
	Confidence	Were the delivery staff confident in the articulation of the material?
	Summarisation	Was the learning content summarised within the session?
Participant behaviours	Engagement	Were the pupils actively engaged in their learning?
	Inter-pupil dialogue	Were there opportunities for the children to engage each other?
	Knowledge demonstration	Were there opportunities for the pupils to demonstrate their knowledge?
	Self-assessment	Was pupil reflection part of the session?
	Enjoyment	Did the pupils enjoy the session? How did they react to the start of the session, or to the change between sessions?
	Behaviour	Did students behave well?
	Differentiated impact	Did certain pupils react with or engage differently in the material? Which groups and how?

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NOTES

ⁱ <http://www.nesta.org.uk/publications/nesta-standards-evidence>

ⁱⁱ <http://press.conservatives.com/post/98807929855/nicky-morgan-speech-to-conservative-party>

ⁱⁱⁱ For more on this, see the Demos reports, *Character Nation, Learning by Doing* and *Mind Over Matter*, in addition to Goodman A et al, *Social and Emotional Skills in Childhood and Their Long-Term Effects on Adult Life* (2015), Early Intervention Foundation, www.eif.org.uk/wp-content/uploads/2015/03/EIF-Strand-1-Report-FINAL1.pdf; and Gutman L and Schoon (2013), *The Impact of Non-Cognitive Skills on Outcomes for Young People*, Education Endowment Foundation, https://educationendowmentfoundation.org.uk/uploads/pdf/Non-cognitive_skills_literature_review_2.pdf

^{iv}

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/508447/Educational_Excellence_Everywhere.pdf

^v <https://www.gov.uk/government/news/england-to-become-a-global-leader-of-teaching-character>

^{vi} <https://www.gov.uk/government/news/nicky-morgan-launches-rugby-character-drive-with-saracens-fc>

^{vii} <http://www.nesta.org.uk/publications/nesta-standards-evidence>

^{viii} <http://www.behaviouralinsights.co.uk/publications/evaluating-youth-social-action-final-report/>

^{ix} <http://www.sportengland.org/media/3281/aps-questionnaire.pdf>

^x https://v1.educationendowmentfoundation.org.uk/uploads/pdf/Cabinet_Office_-_Childrens_University.pdf

^{xi} For more, see Coe, 2002: <http://www.cem.org/attachments/ebe/ESguide.pdf>

^{xii} Lakens, D (2013), 'Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs', *Frontiers in Psychology*

<http://journal.frontiersin.org/article/10.3389/fpsyg.2013.00863/abstract>

^{xiii} Lakens, D (2013), 'Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs', *Frontiers in Psychology*

<http://journal.frontiersin.org/article/10.3389/fpsyg.2013.00863/abstract>

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