



LEEDS  
BECKETT  
UNIVERSITY

---

Citation:

McKenna, J and Zwolinsky, S (2015) Evaluation of Project HE:RO - Keighley. Project Report. Centre for Active Lifestyles. (Unpublished)

Link to Leeds Beckett Repository record:

<https://eprints.leedsbeckett.ac.uk/id/eprint/2123/>

Document Version:

Monograph (Submitted Version)

---

The aim of the Leeds Beckett Repository is to provide open access to our research, as required by funder policies and permitted by publishers and copyright law.

The Leeds Beckett repository holds a wide range of publications, each of which has been checked for copyright and the relevant embargo period has been applied by the Research Services team.

We operate on a standard take-down policy. If you are the author or publisher of an output and you would like it removed from the repository, please [contact us](#) and we will investigate on a case-by-case basis.

Each thesis in the repository has been cleared where necessary by the author for third party copyright. If you would like a thesis to be removed from the repository or believe there is an issue with copyright, please contact us on [openaccess@leedsbeckett.ac.uk](mailto:openaccess@leedsbeckett.ac.uk) and we will investigate on a case-by-case basis.

LEEDS BECKETT UNIVERSITY

# Evaluation of Project HE:RO - Keighley

---

December 2015



## Reader Information

This report was prepared by Professor Jim McKenna and Stephen Zwolinsky.

### Report Reference:

McKenna, J. and Zwolinsky, S. (2015). *Evaluation of Project HE:RO - Keighley*. Centre for Active Lifestyles, Leeds Beckett University.

### Contact Details:

Professor Jim McKenna,  
201 Fairfax Hall,  
Leeds Beckett University,  
Headingley Campus,  
Leeds,  
LS6 3QS  
Phone: 0113 812 7483  
Email: [j.mckenna@leedsbeckett.ac.uk](mailto:j.mckenna@leedsbeckett.ac.uk)

# Contents

<b>Reader Information</b> .....	<b>1</b>
<b>Contents</b> .....	<b>2</b>
<b>Executive Summary</b> .....	<b>3</b>
<b>1. Introduction</b> .....	<b>4-5</b>
<i>What are the potential benefits of EVOLVE Project HE:RO</i> .....	4
<i>Aims of the report</i> .....	5
<b>2. Methodology</b> .....	<b>6-8</b>
<i>Intervention context</i> .....	6
<i>Data collection and analysis</i> .....	6-8
<b>3. Results</b> .....	<b>9-21</b>
(i) <i>Establishing a logic model</i> .....	9
(ii) <i>Semi structured interviews</i> .....	10-19
<i>Experiences of EVOLVE from a teacher’s perspective</i> .....	10-12
<i>The active ingredients for positive pupil benefit</i> .....	12-19
(iii) <i>SOCARP</i> .....	19-21
<i>SOCARP scoring</i> .....	19
<i>SOCARP data analysis and results</i> .....	20-21
<b>4. Commentary</b> .....	<b>22-23</b>
<b>5. References</b> .....	<b>24</b>
 <b>Tables and Figures</b>	
<i>Table 1: Proportion of Time Spent in SOCARP Categories</i> .....	20
<i>Figure 1: Logic Model Within Project HE:RO</i> .....	9

## Executive Summary

Despite the well-established benefits of physical activity (PA) across the lifecourse, current PA levels in children are low. Even though teachers readily acknowledge that PA can help prevent and manage a number of chronic health conditions, it is more important for them that it promotes the acquisition of social skills, develops better concentration in school and displaces anti-social behaviour. Research now indicates that PA is not an either-or issue; it is imperative for becoming a better learner. Introducing trained staff who activate more pupil PA while also complementing the work of classroom teachers makes real sense. Project HE:RO aims to develop resilient children using a support system-centred around PA.

Within HE:RO EVOLVE Mentors are brought into schools to support classroom teachers and to offer extra-curricular (i.e., outside formal curriculum time) PA. A researcher from Leeds Beckett University observed EVOLVE Mentors in schools between June and October 2015. By shadowing Mentors through their school days and by collecting data through a variety of techniques, including semi-structured interviews and observing children's activity during play, we established a picture of their approach and its impacts.

Typically, EVOLVE Mentors worked with pupils who presented complex issues, had needs beyond the 'normal' pupil and who lacked the basic competencies needed to optimise school experience. EVOLVE Mentors consistently managed and improved behaviour/behavioural incidents for these pupils. This contributed to improving the overall school 'climate'.

Teachers and heads noted how Mentors built meaningful and positive relationships with children and school staff. Mentors quickly established themselves as positive role models who provide important social and learning support. Speedy and effective integration was important for building confidence in the Mentors. This increased confidence and expectations among pupils and teachers. Previously inattentive pupils were noted for doing better in subsequent lessons *because* of the work of the Mentors. The presence of Mentors allowed classroom teachers to work with more pupils in lessons; the Mentors worked directly with these pupils during class time. Equally, with more PA within the school day, teachers noted improvements in overall classroom behaviour. It is not possible for us to distinguish the respective effects of Mentor presence from the impact of the extra PA they activated nor the added teacher motivation that better classroom climates will have produced. However they result, these summative effects are powerful and desirable.

In addition to establishing a powerful, yet unobtrusive, classroom presence, EVOLVE Mentors often incorporated PA and exercise (but only rarely formal sport) into the school day. For example, data indicated that the largest proportion of children's break time was spent in MVPA ('walking' and 'very active' combined), although boys spent significantly more time in MVPA compared to girls. This activity is important for enhancing pupils' self-control and self-determination.

Underpinning these outcomes were five interacting themes (M.A.P.P.S: Male, Additive, Physical, Positive, Social); these seemed to be the active ingredients of EVOLVE's success. Moreover, central to success within the school environment was the Mentors' contribution to continuously working on building and supporting systems that develop resilient young people. Overall, Project HE:RO has the potential to deliver short-term benefits that will contribute to longer-term health outcomes and enhanced academic progress.

# 1: Introduction

## ***What are the potential benefits of the EVOLVE Project HE:RO programme?***

Encouraging active lifestyles can help to address some of the most prominent on-going Public Health priorities in the UK today (1). Not only can physical activity help prevent and manage a number of chronic health conditions, but other benefits in children and young people include the acquisition of social skills through active play, better concentration in school and displacement of anti-social and criminal behaviour (2). Once children can ambulate, they need unstructured, active and energetic play to allow them to develop their fundamental movement skills and master their physical environment. To accomplish this, younger children need to be active for several hours a day. Nevertheless, by the time children start school children are typically developmentally ready to benefit from more intense, structured activity (1).

Despite the well-established benefits found for a physically active lifestyles across the lifecourse, current levels of physical activity are low, especially among children. Recent evidence suggests that only 51% of children and young people achieve the current physical activity recommendations – 60 minutes of moderate to vigorous physical activity each day (3). Further, each day school aged children average 7–8 hours of sedentary time (4); much of this time is caused by sitting in school lessons (5). For substantial parts of their lives, not only do children seem to have little choice nor opportunity to be physically active, but also they are required to be inactive. As a result, schools are quickly becoming central to Public Health campaigns that seek to increase physical activity levels among children (6). Equally, a growing body of evidence points to the necessity for children to play physically to optimise their learning and to the harm of impeding that activity.

To achieve this and establish effective behaviour change within the school environment, projects like HE:RO need to build and support a system that develops resilient children. Moreover, systems that seek to establish learning must place positive emotions at the forefront of their practice. Positive emotions are crucial for learning, especially when grounded by subtle, directing feedback (often this is best when self-determined). Such a system will inevitably acknowledge both that this relies on establishing habits and that habits take considerable time to develop. Often these habits run counter to the behaviours supported by their out of school lives, especially children living in difficult domestic circumstances. In generating positive change, pupils, EVOLVE Mentors and teachers will need support to align their lives around these behavioural imperatives.

### ***Aims of this report***

This report aims to establish worth and value of the EVOLVE programme in terms of pupil behaviour, whether immediate (as in physical activity and session behaviour), spill-over (into classroom behaviour) and/or to the overall school climate. This will be achieved by:

- I. Establishing a Logic Model, based on discussions with EVOLVE staff and teachers from the schools.
- II. Identifying class teacher experiences of the EVOLVE programmes.
- III. Identifying the 'active ingredients' of EVOLVE programmes for positive pupil benefit and
- IV. Establish quantitative impacts of EVOLVE programmes through SOCARP outcomes of physical activity and pro-social behaviour.

## 2: Methodology

### ***Intervention Context:***

EVOLVE is a social enterprise dedicated to deliver against its mission of improving the lives of children and young people in the digital age. For several reasons too many children and young people are becoming disengaged and withdrawn, physically and emotionally, which will lead to serious health, social and education problems in the years to come. Project HE:RO supports children holistically in their development, with a particular focus on increasing their contact with supportive adults, who energetically promote physical activity. EVOLVE carefully recruits and specifically trains young, active and highly motivated staff known as EVOLVE Mentors to deliver physical engagement, active learning and pupil mentoring activities into schools.

Project HE:RO aims to improve the attendance, behaviour and progress of their pupils. Schools/Head teachers work with EVOLVE by hiring and deploying these inspiring role models to deliver against a set of specific educational outcomes for their pupils. Head teachers monitor these educational outcomes to establish that they secure a suitable return on their investment. The schools involved in this evaluation were (i) St Joseph's RC Primary School, Keighley, (ii) Nessfield Primary School, Keighley, (iii) Oxenhope CoE Primary School, Keighley and (iv) Eastburn Junior and Infant school, Keighley.

### ***Data Collection and Analysis:***

An independent researcher from Leeds Beckett University spent five days 'observing' in each of the four participating schools between June 2015 and October 2015. During this time, the researcher shadowed the Health Mentors throughout the school day and collected data through a variety of techniques. The following method of data capture and analysis were used prior to and during visits to each of the participating schools:

- (i) Establishing a Logic Model



Logic Models are typically used by program managers and evaluators to describe the effectiveness of programs/interventions. Logic Models normally clarify and graphically depict a program to serve as a foundation for program planning and evaluation. Models can describe logical linkages among resources, activities, outputs, audiences, and short-, intermediate-, and long-term outcomes related to a specific problem or situation. Once a program has been described in terms of the Logic Model, critical measures of performance can be identified (7).

Developing appropriate and measurable indicators during the planning phase is the key to a robust evaluation. The early identification of indicators can allow the evaluators to learn what baseline data already may be available to help evaluate the project, or to design a process to collect baseline data before the program is initiated. Logic Models are beneficial for recognising the characteristics of a program that are most likely to produce useful evaluation data, and to ascertain a suitable sequence for gathering data and gauging change (8).

#### (ii) Semi-Structured Interviews

Semi-structured interviews were undertaken with teaching staff and EVOLVE Mentors for this part of the study. These interviews set out to identify the experiences of EVOLVE from a teacher's perspective and the 'active ingredients' of EVOLVE programmes for positive pupil benefit. Interviews lasted between 15-45 minutes and were digitally recorded. Data were summarised through a process of iterative listening with key passages transcribed verbatim. Further, participants were given pseudonyms. At the point of analysis N=20 (n=13 school staff and n=7 EVOLVE Mentors) interviews had been completed. The analysis framework for these interviews are detailed below.

The independent researcher from Leeds Beckett University carried out all the semi-structured interviews. To address both inductive and deductive content of the interviews, the analysis was undertaken in two stages. The first stage involved identifying obvious commentary relating to tacit knowledge and experiential learning from the EVOLVE programme reported in each transcript. The second stage involved researchers returning to the original files and undertaking a thematic analysis (9, 10). The process of thematic analysis has six phases, (i) familiarisation with the data, (ii) generating initial codes, (iii) searching for themes, (iv) reviewing themes, (v) defining and naming themes and finally once there is a set of fully worked out themes (vi) writing up (10). This analysis

adopts a flexible methodology; researchers don't purely move from one phase to the next. Instead, it is a more recursive practice where the route is back and forth as required. The themes we report were consistent (a) within a stage of analysis and (b) across the stages of analysis. This provides a high level of data triangulation.

(iii) System for Observing Children's Activity and Relationships during Play (SOCARP)

Numerous activities that children participate in can generally be described as 'play'. These events can be multidimensional and consist of behavioural, motivational, and contextual components. Play has an important role in the emotional, cognitive, motor, social, and physical development of children, and it helps them to learn about and interact with their physical and social environment (11). 'Embodied cognition' describes how physical play enhances brain development, especially in cognitive processes, in young people. Direct observation of this behaviour is particularly useful to capture because it allows for the social and physical contexts of physical activity to be recorded concurrently.

Subsequently, EVOLVE sessions were observed by an independent observer throughout the school day where applicable and appropriate. The researcher undertaking the observations was trained in recording anonymous data. In an unobtrusive way, the researcher recorded how pupils spent their time during EVOLVE sessions. The observation protocol uses the System for Observing Children's Activity and Relationships during Play (SOCARP) (11); which is based on a 10-second observation interval followed by a 10-second recording interval.

SOCARP permits the simultaneous recording of an individual target child's physical activity levels, social group sizes, activity type, and social interactions during play periods. SOCARP is especially appropriate for observing playground-based sessions in schools. Data for different individual children can be summed to provide information on the overall activity environment. Thus, the system provides for the assessment of activities and behaviours and allows comparisons among children within the same play setting and over time. The standard SOCARP protocol records a child's activity, group size, activity type, and social behaviour during each interval (11). Environmental contextual factors (including weather, distracting events, numbers of other staff) are recorded for each observation session.

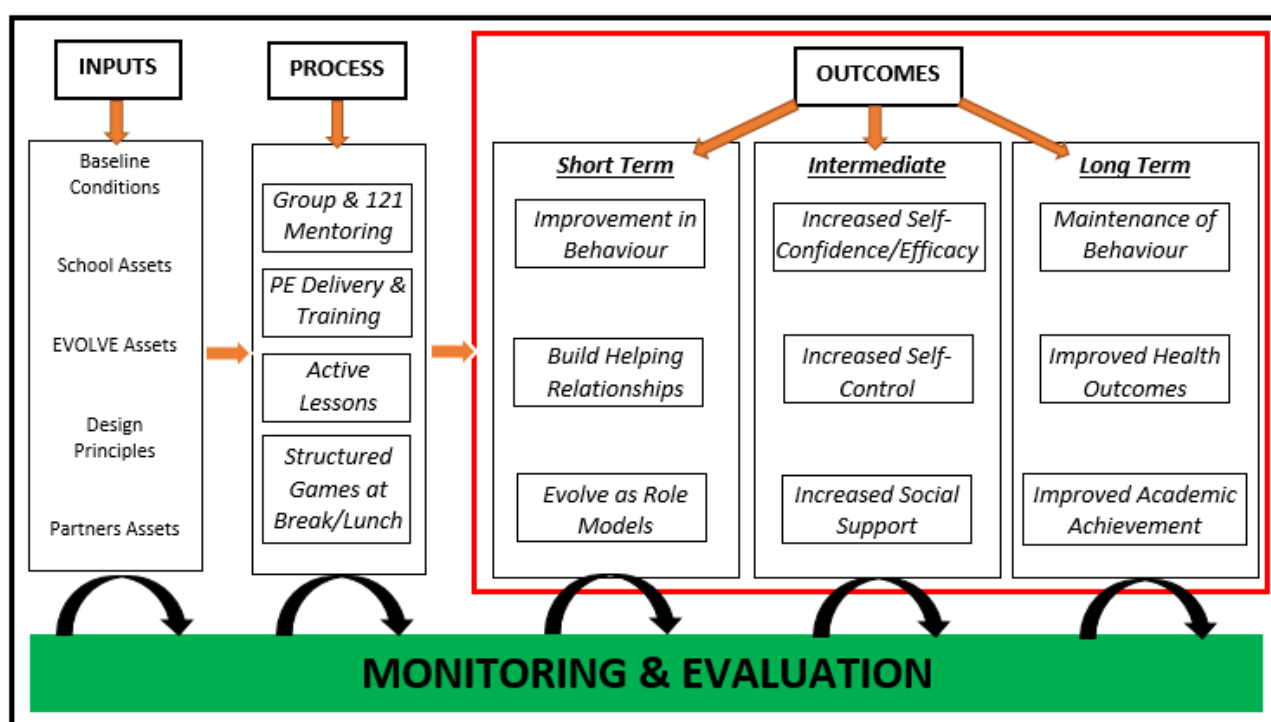
### 3: Results

This section details the results obtained from the data collection process outlined in section 2.

#### (i) Establishing a Logic Model

Logic Models help to identify pathways that are critical to enhancing performance. To help determine and detail the effectiveness of EVOLVE Project HE:RO, the following Logic Model has been developed (figure 1). This model is a graphic representation of the programme and the inputs, process and outcomes to be achieved. The aim of this process was to learn more about the dynamics and active ingredients of the project for improving the lives of children and young people. Even when a Logic Model has been developed at the start of a programme, it is subject to change during programme evolution. As the model shows, the projects inputs, processes and outcomes all feed in to the monitoring and evaluation which in turn fed back to the project development. Furthermore, a condition of a Logic Model for a multi-component community-wide approach is that it is flexible enough to make alterations during programme implementation (12). The results that follow detail the flexibility of the programme and the model to achieve its aims.

Figure 1: Logic Model within Project HERO



(ii) Semi-Structured Interviews (Active Ingredients of Project HE:RO)**Experiences of EVOLVE from a Teachers Perspective:**

This section aims to report the experiences of EVOLVE from a teacher's perspective providing commentary relating to tacit knowledge and experiential learning gleaned from EVOLVE practices.

- *Who does EVOLVE work with and what do they do?*

EVOLVE staff typically, but not exclusively, work with children on the 'Pupil Premium' (mostly boys), who present complex issues and require additional support within the school environment. In addition, they also work with children who have supplementary needs and those children lacking in confidence and/or self-esteem.

*"The criteria are normally, boys and behaviour, children who have problems at home and children whose self-confidence and esteem needs addressing and that can be done through sport" at playtime and lunchtime" (Head Teacher)*

*"Some of these children have profound issues to be dealt with and you're not going to see it all sorted out, but even if you get them through the year and they have coped, that's an achievement. Often EVOLVE has been a big part of that" (Class Teacher)*

Teachers reported that EVOLVE staff were typically provided with a roster of pupils to work with during a term. EVOLVE staff then put in to place a programme of activities – pre agreed with the classroom teachers - that are delivered in and out of the classroom; in 121 and group mentoring sessions.

*"He takes them out to do 121 mentoring sessions, we agree that at the beginning of the day, we know what he's going to do, so that's fantastic" (Class Teacher)*

*"They work 121 and in groups, they work in and out of the class. It just depends on the needs of the children and the teachers" (Head Teacher)*

Many teachers reported that the activities delivered by EVOLVE staff are often underpinned by physical activity. These were often reported as being highly beneficial for the children that EVOLVE were working with.

*“He will often take them out and do maths that involves counting games and physical activities”*

(Class Teacher)

*“He does times table football and all sorts so he does keep it active where he can”* (Class Teacher)

Staff reported deploying an iterative learning process for shaping the working practices of EVOLVE staff throughout the day. This was important to ensure that they were deemed equitable for all pupils. Although removing children from the classroom for 121 group sessions eased the acute difficulties facing teachers regarding disruptive individuals, the general consensus was that, where possible, being in the classroom was the best environment for pupils.

*“In the past I think we might have used EVOLVE slightly wrongly by using EVOLVE to take the children out of the class which was causing us problems for the children remaining in the class because they think that’s not fair”* (Head Teacher)

*“A lot of the children they work with need to learn how to work in a classroom environment, that’s part of their problem”* (Class Teacher)

- *What benefits does EVOLVE bring to the classroom?*

Many teachers reported that the children EVOLVE regularly worked with were often at the centre of disruption in class. Teaching staff often reported that low levels of self-control within the classroom were typical among these pupils. This often manifested itself as disruptive behaviour.

*“He’s good in class because the teachers know he can keep the more disruptive children on task and generally just know he is there to help”* (Head Teacher)

*“Many of these children are wishing to be physically active but they find it hard to find that balance to know when to be active and when it’s appropriate to sit down”* (Class Teacher)

When pupils engage in behaviours that stem from lower self-control, they can often lead to increased teacher effort and the attention paid to that disruptive pupil. When this occurs, it can lead to increased peer rejection and class resentment towards that child. At the same time it can also lower the attention and time allocated to pupils who are self-controlled.

*“A lot of the children they work with have a tendency to feel picked on or that we are having a go at them. They are very sensitive children. So if you have someone from outside who isn’t involved in all the events of the past week they feel it’s fairer”* (Class Teacher)

Many of the teaching staff reported that not only were EVOLVE staff effective managers of these disruptive behaviours in the classroom, but also in many instances, they were able to improve their behaviour and educational progress.

*“Some of the stuff he is getting out of them is way above what they are normally capable of”* (Class Teacher)

*“This one child who is often quite disruptive in my class has recently started working with him, now he is ten times better, so different to before in class”* (Class Teacher)

Aside from managing disruptive behaviour, one of the most recognisable benefits that the teachers identify in the pupils working with EVOLVE related to increased confidence. This increase also appeared to have a knock-on overall effect of producing more positive behaviour in class. Teachers reported that EVOLVE children became much more engaged in constructive classroom activity because of EVOLVE.

*“The confidence he has built there is amazing, a real big change, you see a huge difference. The pupil he is working with has massively grown in confidence”* (Class Teacher)

*“It’s about meeting the social and emotional needs of the children, if you can’t concentrate, have no confidence or lack self-esteem then the classroom is a very difficult place. Building that up, for me, is so important before you can start learning”* (Head Teacher)

### **The Active Ingredients for Positive Pupil Benefit:**

Adopting an essentialist/realist approach - due to the simple, largely unidirectional relationship that is assumed between meaning, experience and language - we were able to theorise motivations, experience and meaning from the data. Within the semi-structured interviews we identified five main interacting themes underlying dialog about Project HE:RO. These revolve around the ‘MAPPs’ acronym: (i) *Male*; (ii) *Additive*; (iii) *Physicality*; (iv) *Positivity* and (v) *Social and Emotional Wellbeing*.

- *Male*

The primary school environment is often seen as a feminised environment, having a paucity of adult males. One of the active ingredients of EVOLVE relates to its ability to introduce young males into the school community. Many of the teachers reported that having that extra male presence in the school/classroom was very important for a number of boys.

*“We lack male role models in school so that aspect of EVOLVE is really helpful.”* (Class Teacher)

*“Having that male presence in class is really important because a lot of them haven’t got it at home, it does make a real difference and they do respect him”* (Class Teacher)

Nevertheless, simply having a male presence in school was not enough to achieve positive outcomes. EVOLVE staff need to establish themselves so they could be seen as role models for the boys they were tasked to work with. Boys needed these adult males to be people they could look up to and talk to, if needed.

*“Quite a few of them have the absence of a male role model or have a male role model who is either working really long hours or away a lot, or a change of male role model and that’s often part of the problem”* (Class Teacher)

*“He’s a good male role model and the children that he mentors like having someone they can speak to”* (Class Teacher)

Even though the male presence was important, not all EVOLVE staff in the schools are male. Female EVOLVE staff also become meaningful role models, especially for girls. However, some teachers reported that their mainly female workforce were more equipped to deal with issues presented by girls.

*Our real behaviour issues are mainly boys, the girls that do have behaviour issues often tend to be problems with withdrawal and so on. The girl’s needs are different and we can meet them more easily as we are predominantly female staff”* (Class Teacher)

To become role models it was important for EVOLVE staff to build relationships with the children. While this is not normally an easy task, given the backgrounds of some of the children, the teaching staff reported how naturally it came to EVOLVE staff.

*“Building that relationship is really important, he’s someone they can talk to”* (Class Teacher)

*“The trust and rapport he has built up with the children seemed pretty instant”* (Class Teacher)

Once EVOLVE staff had built up trust with the children and developed working relationships, teaching staff reported that they quickly became central to the child’s school experience. EVOLVE staff were able to have regular conversations with these pupils. That helped to deal with issues that school staff either were unable to address or didn’t have time to handle.

*“We do an awful lot of work to help the boys open up, and these are the ones that often end up being referred, they just find it intensely difficult to open up to any of our staff no matter how hard we try. The problems then become internalised”* (Class Teacher)

- *Additive*

The extra staff that EVOLVE brings enhances the number of adults with whom pupils – and other teachers – interact. This has an additive effect within the school environment and was seen as an active ingredient of success. This additional support helped to identify and then address the early stages of distraction. Once children recognised that EVOLVE staff could help them to be successful in class, they placed trust in them; this built positive and functional relationships with the children. This meant that more class time was experienced positively.

*“They are very astute, very good at seeing kids who are struggling and need help before they start becoming disruptive and losing focus”* (Head Teacher)

This additive effect appeared to be mediated, and in some instances enhanced, by children identifying EVOLVE staff as adults who were not teachers while affording them a justified ‘place’ in the classroom space. This allowed EVOLVE staff to form distinctive relationships, independent of ‘school authority’. In doing this, they were enhancing their additive influence.



*“They know he is there to help, but they don’t see him as a teacher. It’s just like he is supposed to be here”* (Class Teacher)

*“The children don’t see them as part of the school authority, and they are children who often find school a difficult place to be”* (Class Teacher)

Many class teachers reported that they valued EVOLVE staff being in their classrooms because it added to the total time dedicated to the pupils. It was generally accepted that losing this ‘EVOLVE time’ would be counterproductive.

*“If he’s not here it basically doubles my workload, it’s not like we couldn’t cope without him but he is a fantastic addition to the class”* (Class Teacher)

*“There would be a massive impact in terms of a loss of expertise, time and the capacity to have someone to mentor specific children if they weren’t here. It’s massive to have someone available to do the work they do. The teachers and children really value it”* (Head Teacher)

Above everything else, the children and the teachers generally enjoyed having these energetic, resourceful and capable young adults around the school and in the classroom. In many instances, the children looked forward to their time with EVOLVE.

*“It’s nice just to have him there, he knows where to be and it’s nice to have another pair of hands”*  
(Class Teacher)

*“The children definitely like him, every week they ask me when is he in, when is he in!”*  
(Class Teacher)

- *Physicality*

EVOLVE was reported to bring new, athletic, but not competitively- oriented, adults into the school environment. This was thought to be one of the proximal active ingredients of the programme. This added physicality, which brought extra opportunities for physical activity (as opposed to sport), was described as having a beneficial effect on the delivery of physical education (PE). EVOLVE staff were

able to not only deliver high quality PE sessions, but also to provide professional development and mentoring for teachers to enhance their own PE lessons.

*“The quality of the PE sessions that I’ve seen after he has supported a teacher has raised definitely”*

(Class Teacher)

Moreover, EVOLVE staff enhanced the physical activity levels of children throughout the day, independent of time spent in PE. The earlier section detailing ‘*what EVOLVE does*’ has already described the capability of EVOLVE staff to incorporate physical activity in to the school day in lessons and class time. In addition, EVOLVE staff delivered structured sport and games at break and lunch time to children who may otherwise be inactive at these times.

*“There are now 60 children, who weren’t getting any sport above the PE curriculum, getting an extra hour a week at lunchtime thanks to EVOLVE. That’s massive”* (Class Teacher)

Although the additional activity delivered by EVOLVE was beneficial from a physical health perspective, many teachers and schools reported further benefits for the school. In many instances this added value had direct relevance to the classroom, helping with better learning and refining personal coping strategies.

*“PE is not just about learning to catch, throw and kick, it’s about learning to cope with yourself really, and it’s quite powerful”* (Class Teacher)

*“Were expected to do 2 hours of PE with the children and sometimes it feels like an awful lot if you just think of PE as learning to do sport, but if you think of it as a vehicle for learning all sorts of other things it suddenly doesn’t feel so excessive and in fact I’m beginning to persuade myself that we should be doing PE every day”* (Class Teacher)

The added ‘*physicality*’ that EVOLVE brought to pupils, when especially valued when it was linked to better overall self-control in the children traditionally considered ‘*sporty, but naughty*’. These effects emerged from EVOLVE staff describing personal sporting experiences and discussing sporting situations and the qualities displayed by sportsmen/women in particular sporting scenarios. EVOLVE staff often discussed with the pupils how they could translate those practices into the classroom. The positive impact of these discussions was evidenced by third parties.

*“In the way a sports coach often is a role model rather than a figure of authority, that’s how it works and it’s usually boys”* (Class Teacher)

*“The lad he took out last week is really bright, but often disrupts the whole class. He took him out for 1-to-1 mentoring and got him to think about being captain of the rugby team and how to relate it to the classroom and it really is working. I can now refer to it and say, ‘Remember what Mr EVOLVE said about your rugby’...”* (Class Teacher)

- *Positivity*

Pupils and staff agreed on the overall positivity introduced, and sometimes accentuated, by EVOLVE’s energetic and purposeful young staff. The positive purposefulness associated with their use of physically active games during break times often rubbed off on the pupils. Through its short-term effects, this translated to a more positive environment within school.

*“This morning for example he was working with children who would normally be running round, being silly, pushing and ripping clothes but instead they are playing a game that is controlled, overseen by an adult and coming back to class positive not all whipped up and being disruptive”*  
(Class Teacher)

The positive attitude presented by EVOLVE staff elicited a sense of positivity in the pupils. This new found positivity enabled EVOLVE staff to instil a sense of responsibility in the children. Once this was in place, pupils could reflect on their capabilities in a positive way.

*“These lads are really clever but mess about a bit, but he’s instilled a bit of responsibility in them so they get on with their work now”* (Class Teacher)

*“One of the children was always playing up but EVOLVE instilled a lot of responsibility in him”*  
(Class Teacher)

Additional activities outside of the school day delivered by EVOLVE staff were testament to their positive attitude. Many teaching staff reported the value of these after-school clubs and activities delivered by energetic EVOLVE staff.

*“This year he started the after school club that targeted healthy food and healthy living which is great for the children and families. There is a bit of theory and a bit of practical”* (Class Teacher)

*“He ran the netball club and managed the team, but he’s also thinking about succession planning by bringing in the younger children. The tactics they now have, I mean those girls are frightening; world beaters”* (Class Teacher)

- *Social and Emotional Wellbeing*

Behaviour is often dependent of the context in which it occurs and many teachers reported that the pupils were powerfully influenced by their social environments. Teachers from schools participating in Project HE:RO reported that although they anticipated a lift in activity levels and physical wellbeing, they were less certain that it could contribute additional benefits to wellbeing. However, it soon became evident that Project HE.RO was bringing many, more subtle, benefits.

*“Right at the beginning it was though by the school that physical health would be the key benefit, I mean we have certainly had good PE training from them, but we have got more of the social, emotional and mental health input than we thought we were going to and often that comes through physical activity”* (Class Teacher)

Many teachers at the schools described how the active settings fostered positive social environments. These created chances for constructive social interactions that did not characterise everyday experiences for many children. This was seen as a powerful active ingredient for helping children to deal with difficult situations. These experiences helped pupils to forge strong social support networks that they could rely on in times of trouble. The resulting sense of belonging and integration has been shown to have a profound impact on health, especially for those who have previously felt socially and emotionally excluded.

*“Where we are as a school is quite good for sports and outdoor activities, on the edge of the dales, but the social and mental health that is lacking”* (Class Teacher)

*“The children are very anxious that their time with EVOLVE happens, it’s that caring role model. It’s something they don’t often see in their lives, a male that is prepared to show that they care in a way that they can accept without being embarrassed” (Class Teacher)*

(iii) System for Observing Children’s Activity and Relationships during Play (SOCARP)

The System for Observing Children’s Activity and Relationships during Play (SOCARP) was designed to be specifically applied to the context of the primary school playground. It is used to simultaneously observe and record children’s physical activity levels, the size of their social group, activity type and social interactions during playtime (11).

**SOCARP Scoring:**

In relation to the SOCARP coding framework (11), for activity level, sedentary behaviour was defined by combining the lying, sitting and standing activity codes; moderate to vigorous physical activity (MVPA) was calculated by summing the walking and very active categories and vigorous physical activity (VPA) was restricted to activities coded as very active. Group size was determined by the total number of children in the group in which the target child was located during their observation period. Group sizes were classified as alone, small (2–4 children), medium (5–9 children) and large (10 or more children). Activity ‘type’ related to the mode of activity the target children engaged in during their observed period. The activities were classified as (i) sport (this could be a modification of a sport with or without its official structure, e.g. rules or numbers of players), (ii) active games (e.g. a physically active but a non-sport game, exercise or dance), (iii) sedentary behaviour (e.g. reading, sitting/ standing talking to friends) and locomotion (e.g. walking and jogging that was not part of a game or sport). For interactions, SOCAPR records social interactions as either pro-physical, pro-verbal, anti-physical and/or anti-verbal. At the end of an observation period a record is made of the number of adults supervising playtime, equipment availability and the observation stop time.

## SOCARP Data Analysis and Results:

Data were collected for four days at each of the participating schools. The observations occurred during the summer term 2015 (June to July) and the autumn term 2015 (September to October). Data were only collected during playtimes (break and lunchtime) when children could access the playground (i.e. every day except for heavy rain). In total 64 children were directly observed for a 10-minute period, producing 640 minutes of coded observation.

In line with previous studies using SOCARP as an outcome measure, descriptive statistics were applied to the data corpus (13). For activity level, group size and activity type, the proportion of the time spent in each category was calculated. For social interactions, a percentage occurrence of the total interactions observed for each child was determined and used in the analyses (14). All data were subsequently sex disaggregated.

Table 1: Proportion of Time Spent in SOCAPR Categories

	Mean Percentage of Time ( $\pm$ SD)		
	Boys	Girls	All Children
<b>ACTIVITY</b>			
<i>Lying Down</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>Sitting</i>	3.8 (15.6)	5.1 (12.7)	4.3 (13.8)
<i>Standing</i>	23.9 (12.8)	31.3 (22.1)	26.8 (17.4)
<i>Walking</i>	39.2 (13.2)	42.5 (11.3)	40.5 (12.8)
<i>Very Active</i>	33.1 (26.4)	21.1 (19.9)	28.4 (21.6)
<b>GROUP SIZE</b>			
<i>Alone</i>	10.2 (9.4)	8.7 (13.1)	9.6 (11.8)
<i>Small (2-4 children)</i>	31.7 (21.3)	49.1 (29.6)	38.5 (26.7)
<i>Medium (5-9 children)</i>	20.7 (27.7)	31.2 (35.2)	24.8 (31.2)
<i>Large (10+ children)</i>	37.4 (46.2)	11.0 (24.7)	27.1 (34.4)
<b>ACTIVITY TYPE</b>			
<i>Sedentary</i>	17.2 (16.8)	25.9 (22.9)	20.6 (19.8)
<i>Locomotion</i>	11.1 (13.7)	20.3 (18.4)	14.7 (14.1)
<i>Sports</i>	49.7 (45.6)	22.8 (33.5)	39.2 (42.6)
<i>Active Games</i>	22.0 (27.9)	31.9 (32.8)	25.5 (29.4)
<b>SOCIAL INTERACTIONS</b>			
<i>None</i>	9.7 (18.4)	4.8 (13.9)	7.8 (16.1)
<i>Physical Sportsmanship</i>	25.0 (18.7)	37.0 (29.4)	29.7 (22.0)
<i>Verbal Sportsmanship</i>	44.3 (28.2)	51.7 (40.5)	47.2 (31.7)
<i>Physical Conflict</i>	16.4 (15.1)	4.9 (12.6)	11.9 (14.3)
<i>Verbal Conflict</i>	4.6 (9.1)	1.5 (3.7)	3.4 (8.6)

Equipment was available for the children in 90.6% of the observations. Most (82.8%) observations featured a single adult supervisor. Table 1 shows a number of stark differences in the proportion of time spent in the different SOCARP categories. Regarding activity, the largest proportion of children's time was spent in MVPA ('walking' and 'very active' combined). Boys spent significantly more time in MVPA (72.3%) compared to girls (63.6%), with the majority of this difference being explained by the time boys spent being 'very active'. Sedentary time (sitting and standing) accounted for 31.1% of the children's activity time.

The largest proportion of all children's time was spent in small groups (2-4 children). For girls, small groups also represented the largest proportion of their group size time (49.1%) which was appreciably more prominent when compared to boys (31.7%). On average, boys spent the most of their time (37.4%) in large groups (10+ children), while girls spent 11% of their time in this structure. Further, relatively few children – either boys or girls - spent their observation time alone.

The most common type of activity for all children was sport (39.2%) followed by active games (25.5%). Boys spent nearly twice as much time in sport compared to girls; girls (31.9%) spent considerably more time in active games than boys (22%). Moreover, pro-social verbal interactions accounted for the majority of all children's time (47.2%); this behaviour was more prominent among girls. Regarding physical sportsmanship, girls engaged in this behaviour for considerably more time compared to boys. Further, although physical conflict and verbal conflict were uncommon, when it did occur, it was more prevalent among boys.

## 4: Commentary

EVOLVE staff support all children, although they have often been allocated to support ‘Pupil Premium’ children. These children often present complex issues, have supplementary needs and lack the basic competencies needed to optimise school experience. Across four schools, we observed EVOLVE Mentors managing and improving behaviour/behavioural incidents. Further, they were seen building meaningful and positive relationships with children and school staff, by quickly establishing themselves as positive role models who provide important social and learning support. This led to increased confidence and self-efficacy, both for pupils and class teachers.

In addition to establishing a powerful, yet unobtrusive, classroom presence, EVOLVE Mentors often incorporated physical activity, exercise and sport into the school day. This was important for enhancing self-control and self-determination among the pupils. Underpinning these outcomes were five interacting themes (*M.A.P.P.S*); these seemed to be the active ingredients of EVOLVE’s success. Moreover, central to success within the school environment were the EVOLVE Mentors’ ability to continuously work on building and supporting systems that develop resilient young people. Overall, Project HE:RO has potential to improve the longer-term health outcomes and academic progress of these pupils.

Unfortunately, many of the unhelpful habits that prevail in classrooms and schools are underpinned by low self-control and low resilience. The core message is that self-control encouraged by EVOLVE staff is crucial to achieving short-term educational progress (which is the direct concern of teachers and schools) and long-term health trajectories (which is a societal concern). However, while it is widely acknowledged that this will rely on establishing habits, it is less widely understood or accepted, that these habits take considerable time to develop. Pupils and teachers undoubtable benefit from EVOLVE support to align their lives around these behavioural imperatives. Acknowledging that any performance cycle entails this sequence of drivers; Emotions → Attention → Learning → Performance, Project HE:RO must place emotions at the centre of their daily concerns. Positive emotions are crucial for learning, especially when grounded by subtle, directing feedback (often this is best when self-determined). These positive emotions can be fostered by focusing on past success, personal strengths and by attending to personal progress.

Importantly, sustained repetition and engagement with EVOLVE staff is imperative for (i) pupil learning and (ii) subsequent habit formation. Initial learning hinges on the idea of ‘Repeat to



remember', while consolidated learning is more likely to emerge under the rule of 'Remember to repeat'. Habits (this equates to performance in the Performance cycle) emerge from exposure to cycles of 'Reminder (or cue) → Routine → Reward'. Therefore, it makes sense for EVOLVE staff to shift attention away from relying on personal motivation to providing systems that automatically prompt repetition. As teachers are central to routines within school life, interventions like Project HE:RO need to provide simultaneous teacher support if they are to become successful and sustainable. We found evidence that this was happening in each of the schools who participated in this research.

In the school environment, when pupils combine not knowing the specifics of what to do in a given situation with a generic assumption that they don't know how to make any progress, they are likely to encounter problems. This scenario can leave pupils on their own to handle the consequences of unresolved learning issues and often leads to disruption in class. Equally, the resentment of pupils who demonstrate self-control and/or resilience becomes palpable, especially when their productive habits go unseen. In an attempt to address such issues, Project HR:RO increasingly addresses how young people can be encouraged to approach learning (self-control) and how to handle the setbacks that are central to it (resilience).

Indeed, many teachers acknowledge that self-control (which can be defined as knowing what to think and when to think it) and resilience (knowing how to respond optimally to recover from setbacks) are learnable features of personal character that EVOLVE help to develop.

## 5: References

1. Department of Health. Start Active, Stay Active: A report on physical activity for health from the four home countries" Chief Medical Officers. London: Department of Health; 2011.
2. Warwick I, Mooney A, Oliver C. National Healthy Schools Programme: Developing the evidence base. London, Thomas Coram Research Unit and Institute of Education: University of London., 2009.
3. Griffiths LJ, Cortina-Borja M, Sera F, Pouliou T, Geraci M, Rich C, et al. How active are our children? Findings from the Millennium Cohort Study. *BMJ open*. 2013;3(8):e002893.
4. Craig R, Mindell J, Hirani V, eds. Health Survey for England 2008: Volume 1 Physical Activity and Fitness. London: The NHS Information Centre; 2009.
5. Mantjes JA, Jones AP, Corder K, Jones NR, Harrison F, Griffin SJ, et al. School related factors and 1yr change in physical activity amongst 9-11 year old English schoolchildren. *The international journal of behavioral nutrition and physical activity*. 2012;9:153.
6. Hyndman BP, Benson AC, Ullah S, Telford A. Evaluating the effects of the Lunchtime Enjoyment Activity and Play (LEAP) school playground intervention on children's quality of life, enjoyment and participation in physical activity. *BMC public health*. 2014;14:164.
7. McLaughlin J, Jordan B. Logic models: a tool for telling your program's performance story. *Evaluation and Planning*. 1999;22:65-72.
8. Millar A, Simeone R, Carnevale J. Logic models: a systems tool for performance management. *Evaluation and Planning*. 2001;24:73-81.
9. Pringle A, Zwolinsky S, McKenna J, Robertson S, Daly-Smith A, White A. Health improvement for men and hard-to-engage-men delivered in English Premier League football clubs. *Health Education Research*,. 2014;29(3):503-20.
10. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology*. 2006;3(2):77-101.
11. Ridgers ND, Stratton G, McKenzie TL. Reliability and validity of the System for Observing Children's Activity and Relationships during Play (SOCARP). *Journal of physical activity & health*. 2010;7(1):17-25.
12. Van Koperen TM, Jebb SA, Summerbell CD, Visscher TL, Romon M, Borys JM, et al. Characterizing the EPODE logic model: unravelling the past and informing the future. *Obesity reviews : an official journal of the International Association for the Study of Obesity*. 2013;14(2):162-70.
13. Powell E, Woodfield L, Nevill A. Children's physical activity levels during primary school break times: A quantitative and qualitative research design. *European Physical Education Review*. 2015:1/7.
14. Ridgers ND, Carter LM, Stratton G, McKenzie TL. Examining children's physical activity and play behaviors during school playtime over time. *Health education research*. 2011;26(4):586-95.