

Effectiveness of educational interventions: An ecological systems analysis of initiatives from the UK opportunity areas programme

Sara Spear¹  | Phil Kirkman² 

¹St Mary's University, Twickenham, UK

²Anglia Ruskin University, Cambridge, UK

Correspondence

Sara Spear, St Mary's University,
Waldegrave Road, Twickenham TW1 4SX,
UK.

Email: sara.spear@stmarys.ac.uk

Funding information

Ipswich and Norwich Opportunity Areas

Abstract

Government interventions to address inequalities in education are common in the United Kingdom and internationally. Whilst there is a tendency for policy discourse to focus on benchmarks and indicators as measures of educational success, the inclusiveness and effectiveness of government interventions in education has been questioned. This paper uses the ecological systems perspective as a way of analysing how government interventions may, or may not, lead to real impact on young people's educational outcomes. Two case studies are presented on projects funded as part of the opportunity areas (OA) programme in England to tackle barriers to learning for young people: Ipswich 'Learning Behaviour Leads' and Norwich 'Engagement Coaches'. The research team carried out an evaluation of these projects in seven schools, using a mixed methods approach which involved interviews and reflective journals by the staff delivering the projects ($n=7$), interviews with members of the school senior leadership teams ($n=7$), an online survey with teachers ($n=23$) and focus groups with young people involved in the projects ($n=14$). The evaluation found that although there was shared understanding of the purpose and priorities of the OA programme between the macro and exosystems, there were tensions between these and the microsystem, and a lack of interconnection with the mesosystem. Whilst the projects benefited the young people involved, they fell short of the initial

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 The Author(s). *British Educational Research Journal* published by John Wiley & Sons Ltd on behalf of British Educational Research Association.

intentions to foster engagement amongst the most at-risk groups, and failed to address the macro aims of fostering a pan-system response.

KEYWORDS

education intervention, engagement, government, learning behaviours

Key insights

What is the main issue that the paper addresses?

Government interventions to address inequalities in education are common, but their effectiveness is questioned. This paper analyses how government interventions may, or may not, lead to real impact on young people's educational outcomes, using an ecological systems perspective to analyse two case study interventions.

What are the main insights that the paper provides?

The paper provides insight into gaps between the macro/exo and microsystems, and lack of interconnection with the mesosystem, which meant that although the interventions provided some benefits for individual young people, they failed to foster engagement amongst the most at-risk groups or a pan-system response.

INTRODUCTION

There is a well-established tradition of government interventions in educational contexts both in England and internationally—for example, governments in India (MHRD, 2015), Australia (DoE, 2022) and South Africa (GoSA, 2023) all fund a range of programmes in schools. Interventions range from those targeting specific subject areas and skills, for example Rapid Phonics (DfE, 2018a) and Sport Premium (Callanan et al., 2015), to those aimed at certain groups of children, such as Pupil Premium (DfE, 2013) and Fresh Start (DfE, 2018a). The latter type of programmes have often targeted young people from low socio-economic backgrounds, in light of evidence that young people in this group are at particular risk of disengaging with school and leaving formal education without the qualifications and skills needed for successful future lives (Avermaet et al., 2010). Children's engagement with, and achievement in, school can predict a range of future outcomes, including employment, income and health (Macdonald et al., 2017). Government interest in interventions to address inequalities in education can therefore be seen as an investment in future society, driven by a desire to avoid excessive unemployment in the future (Vandenbroeck, 2010). In this policy discourse, there is an emphasis on benchmarks and indicators, with young people expected to reach a certain level of knowledge and skills to operate within the global economy (Boeren, 2019). Education policy in the last few decades in England has subsequently focused on producing standardised learning outputs, which it is believed will drive economic value in the future (Elliott, 2001).

Evaluation of educational interventions has therefore tended to focus on measuring outcomes based on student achievement against the money spent (VanDerHeyden & Harvey, 2013). Biesta (2010) criticises this 'technocratic' approach for limiting the ability of educational professionals to be able to judge what is educationally desirable in particular situations. Randomised controlled trials in education research have been criticised, in particular, for focusing too much on statistical aggregation and outcomes, and neglecting contextual factors and the implementation process (Connolly et al., 2018; Outhwaite et al., 2020).

Several meta-analyses have been conducted which summarise the impact of educational interventions, and there are mixed reports on the appropriateness, inclusiveness and effectiveness of interventions. Siddiqui and Ventista (2018) found weak but positive evidence that interventions were effective in the short-term at improving students' non-cognitive skills, but there was a lack of evidence regarding their longer-term impact on students' achievements. School-parent collaboration and supporting students to communicate their feelings were the most effective interventions. Lazowski and Hulleman (2016) concluded that interventions aimed at improving students' motivation were generally effective, but identified barriers including researchers underestimating the complexity of classroom environments and teachers lacking research expertise. de Boer et al. (2014) found that interventions aimed at improving students' academic performance had most impact when implemented by the research team. They argued that the long-term effectiveness of interventions will therefore rely on motivating and instructing teachers in implementing the interventions, so that new knowledge and ways of working can be internalised and impact students' performance beyond the experimental period. Goldberg et al.'s (2019) meta-analysis of interventions adopting a whole-school approach to enhancing social and emotional development found significant but small improvements in social, emotional and behavioural adjustment, but no significant impact on academic achievement. They also noted a lack of emphasis on programme implementation in the evaluation.

Regarding the intervention implementation process, Pegram et al. (2022) found in their study with 10 schools in England and Wales that whilst the schools implemented many interventions, they generally did not use evidence from experimental research to decide which interventions to start or continue. They propose that teachers may need more information to be able to determine what will work in their context, and with the resources they have available. This adds weight to the calls from researchers such as Lazowski and Hulleman (2016) and Connolly et al. (2018) to reframe the 'what works' narrative in educational interventions, towards 'what works for whom, under what conditions and in what circumstances' (Connolly et al., 2018, p. 290). When considering government-funded interventions specifically, Billington et al. (2022) found that the tight timescale required for the intervention resulted in a lack of consultation with the young people whom the intervention was designed to help, with a focus on outcomes over process and context. In light of this existing literature, this paper uses the ecological systems perspective as a way of analysing how government interventions may, or may not, lead to real impact on young people's educational outcomes (Caldwell & Mays, 2012).

Ecological systems perspective

Ecological systems theory was proposed by Bronfenbrenner (1977) to understand human development, and sets out that a developing person is embedded within 'a nested arrangement of structures, each contained within the next' (Bronfenbrenner, 1977, p. 514). There are four levels within this arrangement: microsystem, mesosystem, exosystem and macrosystem, and the theory emphasises relationships both within and between levels. The

microsystem consists of the relations between the developing person and their immediate physical setting, including the roles and activities they undertake within this setting. The mesosystem is a system of microsystems, comprising the interrelations amongst the major settings in which a developing person is based. The exosystem refers to other settings and structures that influence what happens in the microsystem, but that do not involve the developing person directly. The macrosystem refers to the larger cultural context surrounding the person, including laws, policies, ideologies and cultural norms, which evolve over time (Bronfenbrenner, 1977; Onwuegbuzie et al., 2013). This influences what happens in both the microsystem, mesosystem and exosystem. Therefore, the levels of the system do not just influence the level below them, but rather each level interacts with, and is influenced by, all the other levels.

An ecological perspective is valuable for the context of this study in offering a way to consider interactions both within and between ecological systems, therefore enabling analysis and recommendations at policy and practice level (Eriksson et al., 2018). The macro–exo–meso–micro frame has been used to analyse policy implementation in the public health care system, with a study by Caldwell and Mays (2012) investigating the Collaboration for Leadership in Applied Health Research & Care (CLAHRC) initiative. Using this frame for analysis brought insight into the development and implementation of CLAHRC, which originated as a macro-level policy in the Department of Health, before being translated at the meso level into a National Institute for Health and Care Research (NIHR) programme, and then implemented at the micro level in local areas in England. Using the macro–exo–meso–micro frame illustrated the importance of shared understanding of the aims and objectives at each level, to enable successful policy implementation (Caldwell & Mays, 2012). Caldwell and Mays (2012) posit that the frame could also be used to identify differences in the implementation and effectiveness of multi-site programmes, making it particularly appropriate for exploring educational interventions across several settings.

Ecological systems theory has been applied in educational contexts, with a focus on organisations as the micro-level actors, as well as individuals. For example, Constantinides (2021) analyses an educational ecosystem for a multi-academy trust (MAT), defining the microsystem as the pattern of activities, roles and interpersonal relationships experienced by the MAT executive leaders, the mesosystem as the school and MAT organisational attributes, the exosystem as the indirect, external environment, including government policies, parental school choice and partners and education networks, and the macrosystem as the neoliberal political and economic agenda. Constantinides (2021) notes that this approach brought to the fore the interconnections between individual and environmental factors in the complex system of a school. Tong and An (2024) also advocate for using ecological systems theory to help consider the connections between individual learners and their contexts, and the multi-level factors that impact students' learning, in order to construct better educational environments. This approach recognises that education policies are interlinked with health, employment and other social policies (Boeren, 2019; Rad et al., 2022). In a Finnish study, Puroila et al. (2021) used the ecological systems approach to explore young children's belonging, and were able to identify the multi-layered factors affecting belonging, including national educational policies (macro level), the organisational and institutional conditions of educational settings (meso level) and the relations and interactions in children's daily lives (micro level). As the case study in this paper (the opportunity areas [OA] programme) aims to improve the life chances of disadvantaged young people (Scandone et al., 2022), the study by Lörinc et al. (2020) also justifies the relevance of the ecological systems approach. Lörinc et al. (2020) draw upon ecological systems theory to explore the structural conditions contributing to young people's marginalisation in education and employment, identifying funding cuts in education and support services, changes in the labour market and socio-economic deprivation as key factors.

It should be noted that Bronfenbrenner's (1979) ecological systems theory has been criticised for its anthropocentric focus and for neglecting the interconnections of human nature. This is argued to work against sustainability, by focusing on the human condition and reinforcing associated sociocultural, political and economic dimensions, rather than prioritising environmental considerations (Elliott & Davis, 2018). While a full critique is beyond the scope of this paper, in this context, particularly significant are the novel environmental conditions arising from the COVID-19 pandemic, which we will consider in the analysis. We will also consider the school/further education setting as the micro level in this paper, rather than individuals, to maintain a broader focus on the setting in which interventions take place, and avoid an individualist perspective. We also acknowledge the ways in which levels within the ecological system interact with each other to produce a spectrum of influence rather than discrete 'levels' of influence. To signpost this spectrum in our analysis we employ the term 'orientation' as an indication of simultaneous positionality (at the macro, exo, meso and micro level) and contingent discourses that orient behaviour towards particular levels.

Our aim in this paper is to use this nuanced ecological systems perspective to bring insight into the effectiveness of government intervention in education. In doing so, we will draw upon a case study of the OA programme in the United Kingdom, and specific projects that were run as part of this programme, namely the Learning Behaviour Leads (LBLs) and Engagement Coaches (ECs) projects. We will first introduce the programme and these two projects, drawing upon the evaluation study conducted by the authors. We will then use the macro–exo–meso–micro frame to analyse the project planning, implementation and evaluation.

CASE STUDY—THE OPPORTUNITY AREAS PROGRAMME AND LEARNING BEHAVIOUR LEADS AND ENGAGEMENT COACHES PROJECTS

The OA programme was launched in 2017 as part of the English government's plan for improving social mobility through education, targeting the most disadvantaged districts across the country. The programme ran for 5 years, until September 2022, with funding provided to each area, to enable the implementation of education-related projects designed to address local challenges (DfE, 2017). Ipswich and Norwich were two of the 12 Local Authority areas covered by the programme (referred to as the Ipswich Opportunity Area—IOA and the Norwich Opportunity Area—NOA) and priorities for the areas included tackling the barriers to learning that can prevent children and young people from engaging with education and subsequently lead to poor attendance, underperformance and potentially exclusion.

Two projects funded to address these ends were the Ipswich LBLs and the Norwich ECs. Both the LBLs and ECs projects aimed to support pupils experiencing the greatest challenges to engagement in education (IOAa, n.d.; NOAa, n.d.) and were delivered across primary, secondary and further education settings. The LBLs were Teaching Assistants in 23 settings across Ipswich, who had been released from their timetables for 1 day per week for the 2021/2022 school year, funded by the IOA, and who also had access to a £5000 grant. The ECs were full-time, fixed-term roles in six settings within Norwich, funded by the NOA for the 2021/2022 school year. As well as directly improving pupils' engagement in education, the projects also aimed to build capacity within the staff base for supporting vulnerable pupils, so that the impact would continue beyond the funding period. The projects were therefore supported by a programme of weekly online training sessions and resources, which were shared with both the LBLs and ECs project members. The authors undertook an evaluation of the LBLs and ECs interventions on behalf of the IOA and NOA, in order to determine the extent to which the projects impacted young people's engagement with

education and built capacity within the OAs. The research questions which the evaluation sought to answer were:

- RQ1. (a) To what extent have the LBLs and ECs programmes impacted young people's engagement with education, including attendance, behaviour in school, exclusion rates and progress and achievement?
(b) What approaches have been most effective in positively impacting young people's engagement with education?
- RQ2. (a) To what extent have the LBLs and ECs programmes facilitated meaningful interaction with the voluntary and community sector (including with other opportunity area initiatives)?
(b) Which interactions with the VCS have been most mutually beneficial?
- RQ3. (a) To what extent have training and peer support activities been effective in helping LBLs and ECs to deliver impact?
(b) What further training/support is required for LBLs and ECs in the future?

Evaluation methodology

The evaluation began several months into the implementation of the LBLs and ECs projects (which had commenced in September 2021), due to the timescales of the contracting process. The research team initially invited all six EC settings to participate in the study, and selected a purposive sample of 10 LBL settings, to include primary, secondary and further education. Securing the participation of the settings proved challenging, however, and the evaluation ultimately proceeded with two Norwich and five Ipswich settings. We undertook data collection in two phases. The first phase in January–March 2022 explored the behavioural and engagement issues in the settings, and the intentions for and initial delivery of the projects. This involved interviews with the LBLs/ECs ($n=7$) and a member of their senior leadership team (SLT; $n=7$) and an online survey sent to teachers in each of the settings (which gathered 23 responses). We also asked the LBLs/ECs to keep a reflective journal throughout the project delivery. The second phase took place in April–June 2022 and explored the project implementation and impact. We invited the LBLs/ECs and SLT members to participate in a follow-up interview, and three LBLs, two ECs and three SLT members took part. All seven LBLs/ECs submitted reflective journals. We also conducted focus groups with young people participating in the projects, and these were held in four schools (two primary schools and one secondary school with a LBL, and one secondary school with an EC), with a total of 14 young people. The evaluation was conducted within British Educational Research Association (BERA) guidelines and permissions were granted through the Institution's University Research Ethics Committee. All staff participants were provided with a participant information sheet and signed a consent form, or clicked the consent button on the online survey. Consent to participate in the focus groups was provided by both participants and their parents via a participant information sheet and signed consent form, plus verbal consent from the young people before the start of the focus groups.

The research team sought to collect quantitative data on the attendance, behaviour, exclusion, progress and achievement of the target pupils as part of the evaluation. However, the schools were not able to complete the spreadsheet provided to them to record this data, reporting a lack of capacity due to COVID-19-related staff absences. The OAs instead provided the researchers with quantitative data they had collected from the settings, which recorded the number of young people participating in the project and the support they received, although the comprehensiveness of this data varied between settings, and there was no data on any outcome measures.

Key findings from the projects

The LBLs projects involved between 8 and 24 young people in each setting, and the schools in the ECs projects selected between 14 and 40 young people to participate. In both cases, the young people involved had been selected based on attendance, behaviour, academic progress and social emotional learning, with the cohorts in most settings including young people selected for a mixture of these reasons. Support delivered by the LBLs/ECs included classroom assistance, small group and 1:1 sessions, mentoring and engagement with parents, amongst others. The findings can be summarised in four key areas: project delivery process and support, capacity, impact and staff development.

Delivery process and support

Each LBL/EC was able to choose how to deliver their project, in terms of the young people targeted and the types of support being provided. One EC explained: *'I feel like I kind of moulded it to be what I wanted it to be, and I was given free rein to do that.'* For example, one of the LBLs chose to concentrate on supporting English as an Additional Language (EAL) pupils, helping them to improve their written and spoken English, whereas another LBL trained several pupils as 'friendship ambassadors', who then supported other pupils in social relationships. There was a downside to this freedom though, as the LBLs/ECs themselves, as well as SLT members and other colleagues, felt unclear at the start of the projects about the purpose and expectations of their role. An EC described this issue:

It would have been nice to have some more concrete guidance as to what I ought to do, because it's good that the role is designed so that it accommodates the needs of the school, but at the same time, the school doesn't always know what they're looking for. So, at the start of the year, I was being asked to do miscellaneous things that were actually outside of my role.

This made the project planning and delivery more challenging. Support for the projects within the settings also varied. Both LBLs and ECs noted challenges in working with colleagues, who were often more senior than them, and who could see suggestions offered by the LBL/EC as criticism. One LBL commented: *'some teachers are very much "this is my classroom, my student, my rules", whereas some teachers are absolutely fantastic, they welcomed me with open arms.'* Similarly, whilst SLT members had helped drive the projects in some settings, a minority of LBLs/ECs noted that lack of support at a senior level made it difficult to implement their planned initiative without access to the necessary financial and staff resources and time. Senior-level support also impacted the provision of quantitative data for the evaluation, where an initial confidence and willingness to offer meaningful statistical data eventually resulted in none of the settings providing serviceable quantitative data. Attributions such as *'we don't have capacity ... we are not sure what you need ... we are just waiting for IT ... they don't understand'* suggested that schools were under resource pressures that impacted on their capacity to respond to requests for information, but also a lack of consideration of data capture and monitoring in the project planning stage.

Capacity

High levels of staff absence in both the Ipswich and Norwich settings due to COVID-19 meant that the LBLs/ECs were often used to cover for colleagues. This led to a blurring

between their role as an LBL/EC and other roles, and limited their capacity to deliver a meaningful intervention and to participate in the evaluation. For the LBLs, the day a week allocated to them for the LBL project became subsumed into their usual Teaching Assistant role. This limited their ability to deliver a meaningful intervention and the LBLs/ECs who had struggled to determine a clear plan for the initiative at the start were most likely to suffer from this role creep. Indeed, one of the LBLs participating in the evaluation had not managed to implement any initiative by the second phase of data collection as a result of these various challenges.

The ECs were employed full-time in the programme, and so had more time to give to their projects, but still found that the nature of the demand in the settings meant that they spent a considerable part of the week supporting pupils in the classroom, in a Teaching Assistant role. This was particularly the case when they had been recruited from other roles within the setting and found themselves reverting to their previous role. Limited capacity, coupled with the lack of clarity in roles and expectations, also meant that engagement with other voluntary and community sector organisations (as referred to in the second research question) was not realised in any of the LBLs or ECs projects.

Impact

Data from the interviews and focus groups illustrated the positive impact of the projects on the young people's engagement with education, and provided some evidence in relation to the first research question (considering the impact on attendance, behaviour in school, exclusion rates and progress and achievement). For example, one of the participants in the EAL initiative described how it had improved their language and literacy skills: *'It helped me doing my homework and speaking the language. Understanding other people, trying to have conversations. And writing paragraphs.'* The LBLs/ECs and SLT members also reported success with individual young people against several of the engagement measures, including enabling several pupils to stay in school (reducing exclusion rates), increasing pupils' attendance and growing pupils' confidence in the classroom (improving progress). One SLT member in an EC setting explained:

I would quantify at least three children making an extra one year in school a success. And I am concerned that when the programme finishes and he's gone, at least two of those students will probably go within a month. I will be permanently excluding if I can't find extra provision for them.

The LBLs/ECs did acknowledge that a small number of pupils encouraged to participate in the initiatives had not engaged. One EC commented: *'For some students it's got to the point where I've had to manage my expectations and accept that their behaviours will just be consistent.'* However, the lack of attention during the planning stage to monitoring well-defined project outcomes, and the resultant absence of systematic quantitative data collection, precluded any statistically meaningful measure of impact on young people's engagement in education as part of the evaluation. This was noted by the LBLs/ECs themselves, for example: *'In terms of progress I wasn't able to kind of record that because I just wasn't really sure how to measure the behaviour... there wasn't any guidance of specifically what I should do on a daily basis.'* This produced uncertainty for the LBLs/ECs in being able to evidence the value of their work to colleagues and SLT members.

Staff development

In terms of capacity building and in relation to the third research question regarding the effectiveness of training and support activities for the projects, some of the LBLs/ECs found that the training provided as part of the projects supported their professional development. For example, one LBL noted:

The behaviour and social emotional training around mental health has been interesting, because Covid has had a huge impact on our children. And we are seeing probably more mental health issues now than we've seen ever in children.

However, the relevance of training varied, perhaps as a result of the wide variety of initiatives and the range of settings involved in the projects. For example, LBLs/ECs in further education settings were in the minority, as the majority of pupils involved in the initiatives were from primary and secondary schools. As a result, training which was predominantly aimed at school contexts was less relevant to LBLs/ECs working with older pupils. Many of the LBLs/ECs also drew on their own skills and expertise in delivering the interventions, including counselling experience and ability to speak multiple languages. The ECs had often been recruited for these skills, and so relied on their existing expertise rather than training delivered during the project.

The LBLs were predominantly continuing in their usual role as a Teaching Assistant within the setting, so had the potential to continue using their learning beyond the life of the project, as intended as part of the OA programmes. In contrast, the EC roles were funded by the OA for the duration of the project, and so the ECs needed to seek new roles towards the end of the academic year, either within the setting or externally. This additional challenge added tension to the dynamic within EC settings, as the schools generally did not have the budgets necessary to continue the EC role, despite valuing the work that had been done within the setting. Thus, the project investment in staff development was short-lived and ultimately lost in these contexts.

DISCUSSION

Having introduced the OA programme and the LBLs and ECs projects, we now apply the ecological systems frame to analyse the key factors in the effectiveness of the intervention. For the purpose of this analysis, we consider the English government's plans for the OAs and their broader educational policies as the macrosystem, the OAs as the exosystem, families and other voluntary and community organisations as the mesosystem, and the individual school and further education settings as the microsystem. The discussion picks up on key themes from the findings. Firstly, we explore disconnected priorities across the systems, and the extent to which the microsystem projects aligned with the macrosystem aims. We then consider the intended and actual outcomes of the LBLs and ECs projects, to evaluate their overall success. Finally, we consider how the disconnections between systems can be understood through the lenses of scale, capacity and intention, resulting in 'professional dissonance' and 'organisational disorientation'.

Disconnected priorities

The discourse surrounding the OAs at the national, macro level indicates an intention to improve social mobility through education. This was set in the context of the English

government's priorities for education, which included driving 'economic growth through improving the skills pipeline, levelling up productivity and supporting people to work' (DfE, 2017). The DfE provided the funding for the OAs and maintained oversight of the evaluations of both the individual projects and the overall OA programme, published on the DfE website (DfE, 2018b). The proliferation of evaluation reports for each aspect of the programme delivery is in line with the government's emphasis on 'what works', fostering evidence-based practice (Biesta et al., 2019). The 12 OAs acted as an exo-level tool for turning policy into delivery plans for improving social mobility. At this point there was a high congruence between the macrosystem ambitions and the exosystem articulations, with the priorities in each OA's delivery plan aligning with those of the overall programme (DfE, 2017; IOAa, n.d.; NOAa, n.d.) and a focus on macro-level outcomes, such as pupil attainment, employment rates and economic growth.

Tensions began to emerge between the exo and microsystems though. Whilst the OA delivery plans detailed targets for each area, there was little project planning between the OAs and the individual settings. The LBLs/ECs were often unclear about the purpose and expectations of their role, as were SLT members within the settings. Therefore, whilst the macro and exosystems appeared well connected, interrelations between the exo and microsystems were weak, and failed to establish shared priorities for the delivery of the projects. At the macro level, there was reference to the other policies and departments that link to education priorities (see DfE, 2021), and there were ambitions at the exo level for the LBLs and ECs programmes to engage with other public and voluntary sector organisations as part of a pan-system response (e.g., the mesosystems that sit alongside the microsystem of the school or further education setting). This is in line with the literature, which recognises that improving educational outcomes for vulnerable young people requires a pan-system response (Sanders et al., 2018), including policies targeted at public health, social care, employment, housing, economic regeneration and criminal justice, amongst others (Steadman & Ellis, 2021). However, these connections were not realised at the micro level, with most projects concentrated within the setting. Similarly, Sanders et al. (2018) propose that helping vulnerable young people to achieve at school requires considering the various relationships within their lives, and Billington et al. (2022) note that parental emotional wellbeing and mental health, family dynamics and safeguarding issues can all affect young people's engagement in education. Family and home settings are therefore crucial mesosystems, but exo-meso and meso-micro connections were lacking in the OA's development of the LBLs and ECs projects, and from the initiatives at the micro level. Finally, whilst the Ipswich and Norwich delivery plans both *aimed* to 'put young people at the heart' of the OA work (IOAb, n.d.; NOAb, n.d.), the OA structures and processes, and the LBLs and ECs project development, failed to involve young people. This reflects a predominantly inward orientation within the microsystem, where staff adopted familiar responses to the problems the initiatives aimed to address (e.g., providing more resources to support young people within the setting). The projects therefore did not reap the benefits of a more interconnected approach to the surrounding systems.

Evaluating project success

National (macrosystem) monitoring of educational progress in England orients towards measurable outcomes—predominantly attainment, attendance and exclusions (see, e.g., DfE, n.d.). In alignment with this, the exosystem objectives for the projects focused on similar measurable outcomes, specifically attendance, behaviour in school, exclusion rates, progress and achievement. These measures sit in stark contrast to the Education Act (2002) notion of a 'balanced and broadly based curriculum' (Section 78) and the report of the Expert

National Curriculum Review Panel (James et al., 2011) which identifies four key educational aims: economic, cultural, social, personal and sustainability. Thus, while ostensibly addressing educational disadvantage, in practice the macro-oriented evaluation criteria served to drive a process that directed OA funding towards perpetuating, and even reinforcing, the status quo, supported by standardised nationalised criteria. Given this context, it was arguably hard for the LBLs/ECs to prioritise the *actual* educational needs of marginalised pupils, when the weight of the current performance-based system (Poole, 2022) enacts a reductive (attainment, attendance, behaviour) definition of these needs. Thus, the nature of the OA priorities set at the macro level, together with the systems of monitoring and accountability in place across the whole system, together served to (i) create a context in which the educational needs of pupils were not understood or routinely addressed and (ii) discourage the professionals who could have done this from acting, by reinforcing macro-oriented measures of 'success'.

By these macro-level priorities, it would be reasonable to understand the LBLs and ECs projects as a failure. Whilst delivery plans at the exo level emphasised the need to establish a baseline and track pupil progress and achievements, there were no processes in place to define, monitor and collate this data at the micro level. Subsequently, there was no evidence to suggest a *systemic* improvement in either attendance, attainment or behaviour. Indeed, some LBLs and ECs were not able to deliver the intended interventions, as pupils did not engage at all. There was also a lack of engagement with parents or other voluntary and community organisations in the mesosystem, thereby not approaching any notion of a pan-system response to educational disadvantage. Conversely, though, one might evaluate the limited range of outcomes discussed in our findings as *acceptable*, particularly given the exceptional contextual factors (in particular, COVID-19 absences, lack of capacity within the settings and lack of clarity of the LBL/EC role). Most of the projects relied on the impact of a single member of staff (the LBL/EC) on the young people chosen to take part in the project. Billington et al. (2022) note that members of school staff can play a crucial role in a young person's life and argue that this is often 'the most effective naturalistic form of intervention in supporting young people', but which often remains unseen and unrecognised. The qualitative data from the LBL/EC evaluation brings this type of relational connection between staff and young people to the fore, and should not be undervalued when considering the work of the professionals involved, and the impact of the programmes on individual young people.

Professional dissonance and organisational disorientation

The disconnect of priorities evident between the levels can be understood as a professional dissonance arising from inherent conflict in the remits of the stakeholders in each system. In one sense, the ideals of tackling barriers to learning, poor attendance, underperformance and exclusion are laudable and were consequently shared across the macro/exo and microsystems. However, a systemic tension emerges when decision-making is viewed through the complementary lenses of (i) scale, (ii) capacity and (iii) intention, which leads to a professional dissonance for the educators delivering the projects. Public education exists in a context of finite resources that are assembled, allocated and evaluated at the macro level (scale). As not everything is possible (capacity), decisions are made to ensure that what is *possible* will be implemented for *most*; resources are often therefore prioritised towards meeting the needs of most stakeholders. This would be a false dichotomy if presented as a stark choice between meeting the needs of *many* versus meeting the needs of *all*. However, it would not be unfair to conclude that decisions are made that balance these competing demands at every level of the system. This can be seen in the design of the OA strategy itself,

as rather than prioritising the needs of *all* disadvantaged children (intention), the OA policy was designed to target the most disadvantaged *areas* (DfE, 2017).

While this choice can arguably be mitigated at macro/exo levels through balanced resource allocation, decisions become more complex at the micro level (scale). This is because the core responsibility of schools and teachers is to educate *all* the pupils in their care. Thus, the orientation of decision-making in the microsystem is towards all pupils. This sits in contrast to a macro/exosystem role, which assumes responsibility for a much larger population, where the targeting of resources towards the needs of *most* pupils necessarily means that not *all* pupils' needs can and will be met (capacity). At the micro level, then, the capacity choice in relation to resource allocation becomes more complex as decisions about who to include and who to exclude, or how much support to offer, become linked to actual individuals. This forces decisions which contradict the core responsibility of schools and teachers; to care for *all* their pupils. At this level, the factors at play are the following.

- Content: What are the pupils being supported with?
- Delivery: How will we know the support has been delivered?
- Breadth: How many pupils can we support?
- Depth: How much can we support pupils?
- Expertise: How effectively can we support them?
- Focus: How well do we plan the support?
- Outcome: How will we know how well they have been supported?

Professionals attempting to meet the needs of individuals in a system of accountability focused on macro-level success therefore experience a 'professional dissonance'. This can be summarised as attempting to answer the question: 'To what extent do I act in a way that is right for *most* pupils or can I do what is right for *this* pupil?' Thus, with a microsystem orientation, the trade-off between capacity and intention is perhaps more keenly felt than with a macro/exosystem orientation. Decision-making in the LBLs and ECs programmes tended to prioritise the content, delivery, breadth and depth of projects at the expense of expertise, focus and outcome, with matters of planning and monitoring subsequently lower on the list of priorities. This resulted in the lack of engagement with mesosystems, and with the evaluation process. The professional dissonance experienced by individuals also resulted in an 'organisational disorientation', where competing priorities between the macro/exo and microsystems led to a dysfunctional approach to project delivery. Organisational disorientation arises from the question: 'How can we even act in a way that is right for *most* pupils?' In short, faced with the impossible challenge of addressing behaviour and improving attainment and attendance with inadequate and short-term funding, the settings did not know what to do, and therefore often just did more of the things they had already been doing.

Implications and recommendations

This paper is limited in scope to the case studies of two projects within the OA programme, which is only one example of many government interventions in education. However, the in-depth analysis of the planning and implementation of the projects, using a nuanced ecological systems approach, highlights several issues for interventions of this nature.

The study found gaps between the macro/exo and microsystems, and a notable lack of interconnection with the mesosystem. Whilst the purpose and priorities of the OA programmes were similarly understood at the macro and exo levels, in the production of the area delivery plans, this was then diluted between the exo and micro levels, where the LBLs and ECs projects—and the initiatives within them—were developed. The LBLs and

ECs projects were intended to provide settings with the flexibility to develop initiatives to address local needs, in line with the overall OA priorities. However, uncertainty about the purpose of the projects and the role of the LBLs and ECs, inherent contradictions between the macrosystem measures of success and the needs of individuals in the microsystem, and limited capacity within the settings led to a variable approach to the project delivery, and some LBLs or ECs defaulting to existing activities in the setting. Related to this issue was the tendency to prioritise the content, delivery, breadth and depth of projects at the expense of expertise, focus and outcome. Overall, whilst there was some evidence of the benefits of the projects for young people, they fell short of the initial intentions to foster engagement amongst the most at-risk groups, and failed to address the macro aims of fostering a pan-system response. This highlights the need for greater investment by the exo level at the start of an intervention project, to clarify roles and expectations at the micro level and to support micro-level actors in project planning, and in engaging with mesosystem actors. This also emphasises the need for an understanding at the exo level of the likely barriers to successful project implementation, and sustained support to address these issues, to avoid the project drift that is likely to occur in busy environments, with multiple pressures on time and resources.

The lack of planning at the start of the project also meant that it was difficult to meet macro-level expectations for evaluation, in order to share findings and inform evidence-based practice. This could have been remedied by, for example, collecting baseline data before the project started, and then throughout its delivery, which would have helped the LBLs and ECs to track the young people's progress, as well as providing evidence of the impact of the projects. We recommend that mechanisms and expertise to support project evaluation should be embedded at micro level from the outset of any intervention. This could include staged funding for settings, contingent on participation in the evaluation, to incentivise data capture and evaluation. Providing templates for capturing data at the outset would also set expectations for the engagement required and facilitate comparison between settings. Agreeing key metrics between the exo and micro levels and sharing regular progress updates amongst key stakeholders at both levels can reinforce the priorities of the project. Finally, securing buy-in from SLT members is crucial to drive engagement within hierarchical education settings, and to embed projects within the setting, rather than these becoming isolated activities with no long-term viability. By fostering these stronger connections between and within the macro, exo, meso and microsystems, educational interventions have greater chances of success, and of making a real impact on young people's lives.

FUNDING INFORMATION

The authors received funding from the Ipswich and Norwich Opportunity Areas in carrying out this research.

CONFLICT OF INTEREST STATEMENT

There are no conflicts of interest.

DATA AVAILABILITY STATEMENT

Research data are not shared.

ETHICS STATEMENT

The authors confirm that the research presented in this paper was carried out with due consideration to all relevant ethical issues and in line with BERA's Ethical Guidelines for Educational Research. Permissions were granted through the Institution's University Research Ethics Committee.

ORCID

Sara Spear  <https://orcid.org/0000-0002-1693-9018>

Phil Kirkman  <https://orcid.org/0000-0001-8113-8404>

REFERENCES

- Avermaet, P. V., Houtte, M. V., & den Branden, K. V. (2010). Promoting equity and excellence in education. An overview. In K. V. den Branden, P. V. Avermaet, & M. V. Houtte (Eds.), *Equity and excellence in education: Towards maximal learning opportunities for all students* (pp. 1–20). Taylor & Francis.
- Biesta, G. J. (2010). Why 'what works' still won't work: From evidence-based education to value-based education. *Studies in Philosophy and Education*, 29(5), 491–503.
- Biesta, G., Filippakoub, O., Wainwright, E., & Aldridgeb, D. (2019). Why educational research should not just solve problems, but should cause them as well. *British Educational Research Journal*, 45(1), 1–4.
- Billington, T., Gibson, S., Fogg, P., Lahmar, J., & Cameron, H. (2022). Conditions for mental health in education: Towards relational practice. *British Educational Research Journal*, 48(1), 95–119.
- Boeren, E. (2019). Understanding Sustainable Development Goal (SDG) 4 on "quality education" from micro, meso and macro perspectives. *International Review of Education*, 65, 277–294.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513–531.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Caldwell, S. E. M., & Mays, N. (2012). Studying policy implementation using a macro, meso and micro frame analysis: The case of the Collaboration for Leadership in Applied Health Research & Care (CLAHRC) programme nationally and in North West London. *Health Research Policy and Systems*, 10(32), 1–9.
- Callanan, M., Fry, A., Plunkett, M., Chanfreau, J., & Tanner, E. (2015). *The PE and sport premium: An investigation in primary schools*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/489477/DFE-RR489_PE_and_sport_premium_an_investigation_in_primary_schools_-_final_report.pdf
- Connolly, P., Keenan, C., & Urbanska, K. (2018). The trials of evidence-based practice in education: A systematic review of randomised controlled trials in education research 1980–2016. *Educational Research*, 60(3), 276–291.
- Constantinides, M. (2021). Understanding the complexity of system-level leadership in the English schooling landscape. *Journal of Educational Administration*, 59(6), 688–701.
- de Boer, H., Donker, A. S., & van der Werf, M. P. C. (2014). Effects of the attributes of educational interventions on students' academic performance: A meta-analysis. *Review of Educational Research*, 84(4), 509–545.
- DfE. (2013). *Evaluation of pupil premium research report*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/243919/DFE-RR282.pdf
- DfE. (2017). *Unlocking talent, fulfilling potential*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/667690/Social_Mobility_Action_Plan_-_for_printing.pdf
- DfE. (2018a). *Literacy and numeracy catch-up strategies*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739722/literacy_and_numeracy_catch_up_strategies_amended_july-2018_amended_10.09.18.pdf
- DfE. (2018b). *Opportunity areas programme: Research and analysis*. <https://www.gov.uk/government/publications/opportunity-area-programme-research-and-analysis>
- DfE. (2021). *DfE outcome delivery plan: 2021–2022*. <https://www.gov.uk/government/publications/department-for-education-outcome-delivery-plan-dfe-outcome-delivery-plan-2021-to-2022>
- DfE. (n.d.). *Statistics at DfE*. <https://www.gov.uk/government/organisations/department-for-education/about/statistics>
- DoE. (2022). *Engaged classrooms: Supporting all students to achieve*. <https://www.education.gov.au/engaged-classrooms-supporting-all-students-achieve>
- Education Act. (2002). *Crown and database*. <https://www.legislation.gov.uk/ukpga/2002/32>
- Elliott, J. (2001). Making evidence-based practice educational. *British Educational Research Journal*, 27(5), 555–574.
- Elliott, S., & Davis, J. M. (2018). Challenging taken-for-granted ideas in early childhood education: A critique of Bronfenbrenner's ecological systems theory in the age of post-humanism. In A. Cutter-Mackenzie, K. Malone, & E. Barratt Hacking (Eds.), *Research handbook on childhoodnature: Assemblages of childhood and nature research* (pp. 142–177). Springer International. https://doi.org/10.1007/978-3-319-51949-4_60-1
- Eriksson, M., Ghazinour, M., & Hammarström, A. (2018). Different uses of Bronfenbrenner's ecological theory in public mental health research: What is their value for guiding public mental health policy and practice? *Social Theory & Health*, 16, 414–433.
- Goldberg, J. M., Sklad, M., Elfrink, T. R., Schreurs, K. M. G., Bohlmeijer, E. T., & Clarke, A. M. (2019). Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: A meta-analysis. *European Journal of Psychology in Education*, 34, 755–782.

- GoSA. (2023). *Education*. <https://www.gov.za/issues/education>
- IOAa. (n.d.). *Learning behaviour leads*. <https://ipswichopportunityarea.co.uk/learning-behaviour-leads/>
- IOAb. (n.d.). *Opportunity Area 2017–20: A local plan to deliver opportunities for children and young people in Ipswich*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/696854/Social_Mobility_Delivery_Plan_Ipswich_v11_FINAL_WEB.PDF.PDF
- James, M., Oates, T., Pollard, A., & William, D. (2011). *The framework for the National Curriculum: A report by the Expert Panel for the National Curriculum review*. Department for Education.
- Lazowski, R. A., & Hulleman, C. S. (2016). Motivation interventions in education: A meta-analytic review. *Review of Educational Research*, 86(2), 602–640.
- Lörinc, M., Ryan, L., D'Angelo, A., & Kaye, N. (2020). De-individualising the 'NEET problem': An ecological systems analysis. *European Educational Research Journal*, 19(5), 412–427.
- Macdonald, G., Livingstone, N., & Valentine, J. C. (2017). Families and schools together (FAST) for improving outcomes for children and their families. *Cochrane Database of Systematic Reviews*, 8, CD012760.
- MHRD. (2015). *Major interventions*. <https://www.education.gov.in/en/faq-questions-top>
- NOAa. (n.d.). *External evaluation*. <https://norwichopportunityarea.co.uk/evaluation/>
- NOAb. (n.d.). *Opportunity Area 2017–20: A local plan to deliver opportunities for young people in Norwich*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/696825/Social_Mobility_Delivery_Plan_Norwich_FINAL_WEB.PDF.pdf
- Onwuegbuzie, A. J., Collins, K. M. T., & Frels, R. K. (2013). Using Bronfenbrenner's ecological systems theory to frame quantitative, qualitative, and mixed research. *International Journal of Multiple Research Approaches*, 7(1), 2–8.
- Outhwaite, L. A., Gulliford, A., & Pitchford, N. J. (2020). A new methodological approach for evaluating the impact of educational intervention implementation on learning outcomes. *International Journal of Research & Method in Education*, 43(3), 225–242.
- Pegram, J., Watkins, R. C., Hoerger, M., & Hughes, C. (2022). Assessing the range and evidence-base of interventions in a cluster of schools. *Review of Education*, 10(1), e3336.
- Poole, R. (2022). Perceptions of performativity in English further education. *Research in Post-Compulsory Education*, 27(1), 148–172.
- Puroila, A., Juutinen, J., Viljamaa, E., Sirkko, R., Kyrönlampi, T., & Takala, M. (2021). Young children's belonging in Finnish educational settings: An intersectional analysis. *International Journal of Early Childhood*, 53, 9–29.
- Rad, D., Rede, S. A., Roman, A., Ignat, S., Lile, R., Demeter, E., et al. (2022). Pathways to inclusive and equitable quality early childhood education for achieving SDG4 goal—a scoping review. *Frontiers of Psychology*, 13, 955833.
- Sanders, J., Munford, R., & Boden, J. (2018). Improving educational outcomes for at-risk students. *British Educational Research Journal*, 44(5), 763–780.
- Scandone, B., Bury, J., Robinson, Y., Rezaian, M., Roberts, E., Takala, H., & Woodbridge, H. (2022). Opportunity areas process evaluation. https://assets.publishing.service.gov.uk/media/628e3b2f8fa8f5561ebfa0ab/Opportunity_Areas_Process_Evaluation_Research_Report.pdf
- Siddiqui, N., & Ventista, O. M. (2018). A review of school-based interventions for the improvement of social emotional skills and wider outcomes of education. *International Journal of Educational Research*, 90, 117–132.
- Steadman, S., & Ellis, V. (2021). Teaching quality, social mobility and 'opportunity' in England: The case of the teaching and leadership innovation fund. *European Journal of Teacher Education*, 44(3), 399–414.
- Tong, P., & An, I. S. (2024). Review of studies applying Bronfenbrenner's bioecological theory in international and intercultural education research. *Frontiers of Psychology*, 14, 1233925.
- Vandenbroeck, M. (2010). Early childhood education and care: Equity and excellence in the foundational stage. In K. V. den Branden, P. V. Avermaet, & M. V. Houtte (Eds.), *Equity and excellence in education: Towards maximal learning opportunities for all students* (pp. 145–165). Taylor & Francis.
- VanDerHeyden, A., & Harvey, M. (2013). Using data to advance learning outcomes in schools. *Journal of Positive Behavior Interventions*, 15(4), 205–213.

How to cite this article: Spear, S. & Kirkman, P. (2024). Effectiveness of educational interventions: An ecological systems analysis of initiatives from the UK opportunity areas programme. *British Educational Research Journal*, 00, 1–15. <https://doi.org/10.1002/berj.4038>