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Behavioural control and school exclusion: investigating the impact of school infrastructure on pupil behaviour and inclusion

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ABSTRACT

The study examines how secondary school infrastructure and design shape pupil behaviour and practices associated with school exclusion. Informed by Foucault's theory of panopticism, it draws on qualitative interviews with pupils and staff from three Welsh local authorities and parents/carers from across Wales. Data were analysed using deductive and inductive thematic analysis. Behavioural difficulties were often associated with transitional and unstructured spaces, including corridors, stairwells and communal areas. Visibility helped staff supervise pupils but did not always lead to self-regulation; visible spaces could also provide opportunities to attract attention, test authority or resist expectations. Schools responded differently to pupils who struggled to self-regulate, with some responses focused on sanctions and removal and others on changes to routines, spaces and support. The findings do not show that larger schools are associated with higher exclusion rates. Participants described difficulties in larger school environments, including noise, crowding, supervision and access to familiar staff, while smaller settings were often described more positively. The findings demonstrate the importance of inclusive school design, post-occupancy evaluation and meaningful pupil participation, and suggest that infrastructure cannot be considered separately from how spaces are managed, relationships with staff and the support available to pupils.

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Introduction

Research on how school infrastructure impacts pupils' learning outcomes and behaviour is limited. Despite governments worldwide investing billions in school infrastructure, how pupils at an increased risk of exclusion interact with the school environment is not considered (Conlin and Thompson 2017). Research examining the relationship between school infrastructure and pupil outcomes has primarily focused on aspects

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such as temperature, lighting, acoustics, and functional furniture (Barrett et al. 2015, 2019), rather than investigating whether specific features of the school adversely affect pupil behaviour. Porter (2018) suggests that the impact of school infrastructure on pupil behaviour and risk of being excluded remains largely understudied.

Understanding the influence of school environments on pupil behaviour is crucial for creating inclusive educational settings and reducing school exclusion. School exclusion occurs when a pupil is removed from the school premises due to their behaviour, either temporarily (fixed-term) or permanently, requiring an alternative educational setting (Welsh Government 2024a). School exclusion, whether fixed-term or permanent, significantly disrupts a pupil's education, and research points to long-term consequences of exclusion, including poor educational outcomes, unemployment, involvement in crime, and homelessness, as well as a long-term detrimental impact on health (Demie 2022; Obsuth et al. 2024). Pupils with additional learning needs (ALN), those from disadvantaged backgrounds, and certain ethnic minorities are disproportionately excluded (Demie 2022; Graham et al. 2019).

In Wales, one of the four nations of the UK, the Welsh Government launched the 21st Century Schools Programme in 2009. It is a long-term capital investment initiative aimed at enhancing learning environments and improving outcomes for learners in Wales (Welsh Government 2018). Although the 21st Century Schools Programme aimed to improve outcomes, it overlooked how pupils interact with the built environment, particularly those at risk of exclusion (Wales Audit Office 2017). This gap is particularly significant, given that Ware (2019) explains that Wales strongly emphasises inclusion, with many pupils with ALN being educated either in mainstream schools or specialist units within mainstream schools. Ware (2019) suggests that the prevalence of this type of provision reflects the ethos of Welsh politics, but it may also be influenced by low population density. Recent policy shifts in Wales reflect a move from a medical to a social model of disability, which emphasises the importance of environmental factors in inclusion (Knight and Crick 2022; Ware 2019).

In the Welsh education system, exclusion is considered a serious intervention. The Welsh Government (2024a) frames exclusion as a last resort, applicable only in cases of serious behavioural issues. A recent review from the Welsh Government (2024b) emphasised trauma-informed approaches alongside the need for nurturing spaces, yet highlighted a lack of suitable facilities and concerns about punitive use of isolation rooms (Welsh Government 2024b). While the Welsh Government's (2024b) review acknowledges the role of school environments in supporting at-risk pupils, it overlooks how new infrastructure may exacerbate exclusion risks; this is the gap this article addresses.

This study contributes to international scholarship by showing how school design can shape behaviour and exclusion through the interaction of space, institutional practice and pupil experience. Wales provides a useful case because major investment in new school buildings had taken place alongside a strong policy commitment to inclusion. The findings reveal a wider tension between inclusive aims and environments organised around visibility, supervision and efficiency. By applying Foucault's concept of panopticism, the study moves beyond questions of comfort and attainment to show how communal spaces, school-scale, and access to trusted adults may affect pupils' behaviour, belonging and continued participation in education.

This article examines how school infrastructure shapes pupils' and staff experiences of behaviour, behavioural regulation and practices associated with exclusion by answering the following research questions:

- Do schools create a panoptic environment, where visibility leads to tensions between the competing needs of staff who monitor pupils and the pupils who engage with the environment?
- Are school staff more focused on fixing pupils who struggle to self-regulate their behaviour rather than improving their environment?
- How do pupils and staff experience school size and scale, and what implications do these experiences have for behaviour and exclusion?

This article began by examining the school exclusion policy context in Wales. Next, it explores the literature regarding feelings of belonging in school and how school design impacts pupils' learning outcomes and behaviour. The value of Foucault's (2019a) theory of panopticism is discussed as a conceptual framework for addressing the research questions. After describing the research method, the study's results are presented, and the implications for creating more inclusive school design are discussed.

Literature review

The impact of school infrastructure on pupil development and behaviour is an important but understudied area of educational research. Existing research demonstrates links between physical learning environments and educational outcomes (Barrett et al. 2015; Barrett et al., 2019; Durán-Narucki, 2008). However, much of this research has focused on primary schools and academic attainment, leaving the relationship between school infrastructure, behaviour and exclusion comparatively underexplored (Barrett et al., 2015; Barrett et al., 2019; Tanner, 2009).

The school environment may also influence pupils' behaviour and staff's capacity to respond effectively when difficulties arise. Daniels et al. (2025) argue that the COVID-19 pandemic widened educational inequalities and contributed to a rise in school exclusion. In Wales, Estyn (2025, p.38) found that behaviour remained a persistent concern in secondary schools and had become 'significantly more extreme for a minority of pupils.' Estyn (2025) also highlights that schools were working with fewer resources, tighter budgets and limited parental engagement. Demie (2022) reported a similar problem in England with staff lacking time and resources and having fewer options for supporting pupils at risk of exclusion or for finding alternatives to removing them from class.

The literature suggests that these issues may become important in secondary schools because there are different spatial demands, when pupils are adjusting to larger buildings, new routines and less familiar social environments. Daniels et al. (2019) found that pupils felt less connected to their secondary school by the end of their first year than they had at the start. Daniels et al. (2019) link this decline to concerns about safety, isolation, well-being and social relationships, and emphasise the need to balance private and shared spaces. They explain that the challenge is to create spaces that feel visible and safe without making pupils feel constantly watched (Daniels et al., 2019).

Secondary schools present particular spatial challenges because pupils move repeatedly between classrooms, specialist facilities and communal areas. Tanner (2009) highlights that wide, clearly designed circulation routes can make it easier for pupils to move around and find their way through the school. Most research on school design has examined classrooms in primary schools, where pupils spend most of the day in the same room. There is much less research on corridors, canteens, stairwells and other shared spaces that form a significant part of pupils' everyday experience in secondary schools (Barrett et al., 2015; van Liempd et al., 2020). Rolfe et al. (2022) identified overcrowding in communal spaces as significantly impacting pupil behaviour. They found that, in some schools, the design had not adequately anticipated rising pupil numbers, leaving playgrounds, assembly areas, and other shared spaces under pressure (Rolfe et al., 2022). Rolfe et al. (2022) found that crowded conditions were associated with more conflict between pupils and a greater need for staff to resolve disputes. Similarly, Aminpour (2022) argues that crowding, noise and unwanted physical contact can make incidents more difficult to manage. Although these studies suggest links between spatial organisation and conflict, the evidence base remains relatively small and provides limited insight into how such processes operate in secondary schools.

Research by Porter (2018) argues that school design can fail to create inclusive environments, with issues such as acoustics, temperature and air quality disproportionately affecting pupils who already face barriers to learning. Research argues that inclusive design is not just about making buildings physically accessible. It should also involve considering how pupils experience noise, crowded areas, and moving around shared spaces within the school (Daniels et al., 2019; Rolfe et al., 2022). van Liempd et al. (2020) suggest that smaller teaching areas and access to quieter spaces may help learners manage social and sensory demands while remaining connected to learning.

The design of school spaces can make pupils more visible to staff, but this does not mean that surveillance is complete or that it always produces compliant behaviour. Gallagher's (2010) ethnographic research found that pupils recognised gaps in staff oversight and adjusted their behaviour when adults were no longer watching. Gallagher (2010) found that pupils exploited lapses in surveillance, using them as opportunities for conversation, play, and other forms of behaviour that broke the school's rules.

Although research has consistently linked aspects of the physical environment to educational outcomes, four important gaps remain. First, much of the existing evidence comes from primary schools rather than secondary settings (Barrett et al., 2015; Tanner, 2009). Second, the literature has focused more heavily on academic attainment, while behaviour and exclusion have received far less attention (Barrett et al., 2019). Third, communal spaces such as corridors, stairwells and canteens remain under-researched despite forming a substantial part of pupils' daily experience (van Liempd et al., 2020). Finally, there is little evidence of how these environments affect pupils with additional learning needs and those already at risk of exclusion. This study addresses these gaps by drawing on Foucault's (2019a) concept of panopticism to examine how visibility, self-regulation and the economy of power operate through the design and everyday use of Welsh secondary schools.

Theory: foucault's panopticism

Foucault's (2019a) concept of panopticism provides a way of understanding how power operates through visibility, surveillance and spatial organisation. Drawing on Bentham's Panopticon, Foucault (2019a) argues that individuals may regulate their behaviour when they know they can be observed, even when surveillance is not continuous. Foucault (2019a) extends this principle beyond prisons to institutions such as schools, where space and observation can form part of everyday practices of regulation and control. In this study, panopticism provides a framework for examining how school infrastructure and spatial organisation shape surveillance, pupil behaviour and practices associated with inclusion and exclusion.

In terms of visibility, school design can shape how easily pupils are observed and how supervision is organised. Corridors, communal areas, open spaces and lines of sight can increase visibility, while crowded or poorly configured spaces may make surveillance more difficult. From a panoptic perspective, architecture forms part of how institutional power is exercised, rather than simply providing the setting in which it occurs.

Gallagher (2010) examined surveillance in modern schools and found that confident, dominant, loud and aggressive boys were more frequently targeted for observation. This suggests that surveillance may be uneven, with some pupils becoming more visible to staff and therefore more exposed to behavioural monitoring and regulation. Panoptic power should not, however, be understood as producing uniform compliance. Power relations are relational and may give rise to forms of resistance as well as compliance (Foucault 2019b).

Within panoptic systems, people may modify their behaviour when they are aware that they could be observed, even if monitoring is not constant (Foucault, 2019a). In school settings, the possibility of observation may influence how some pupils act and respond to expectations (Gallagher, 2010). However, it is difficult to determine the extent of this influence, and direct supervision by staff is also likely to remain an important factor in shaping behaviour.

Panoptic arrangements seek to make surveillance more efficient by extending observation across large numbers of people and spaces (Foucault, 2019a). In schools, spatial organisation may therefore support the supervision of large pupil populations, although its effectiveness depends on how spaces are designed and used (Gallagher, 2010).

In this study, these concepts are used to examine how the design and organisation of secondary school spaces shape visibility, surveillance and behavioural regulation, and how these processes may affect pupils' experiences of inclusion and exclusion. Economy of power is particularly relevant to understanding the challenges of supervising large school populations and spaces. These concepts were selected because they provide a way to examine how school design shaped opportunities for observation, how pupils may respond to being observed and how supervision is organised across large school populations and spaces.

Method

The study adopted a qualitative research design to explore how pupils, parents and school staff understand the relationship between secondary school infrastructure, pupil

behaviour and exclusion. A qualitative approach was appropriate because the study focused on participants' experiences and interpretations of school spaces, behavioural regulation, and support, rather than measuring causal relationships between school design and exclusion rates.

Drawing on Foucault's (2019a) theoretical framework outlined above, data were collected using semi-structured interviews with pupils, school staff and parents/carers as part of the ESRC funded Excluded Lives project. The Excluded Lives Project examined the exclusion of secondary school children from schools across the four jurisdictions of the UK: England, Northern Ireland, Scotland, and Wales. The ethics committee at the University of Oxford gave ethical approval for this research, reference CUREC ED-C1A-20-057. After ethical approval was received, recruitment and data collection commenced. This study draws on the data from Wales.

This study draws on interviews as part of the Excluded Lives project across three Welsh case-study local authorities (LAs). Core schools within the case-study local authorities were selected based on their exclusion rates relative to local or national averages. Based on this, schools were categorised as either lower-than-expected (LTE) or higher-than-expected (HTE) excluding schools. This enabled comparison across schools with different exclusion profiles. In total, 38 school staff, 15 young people aged 15 – 16 and 12 parents were interviewed (see Table 1). All young people had attended schools developed through the twenty-first Century Schools Programme.

The HTE, excluding school in LA1 and both schools in LA3, had been formed through the amalgamation of two or more schools. The LTE excluding schools in LA1 and LA2 had moved into new buildings without amalgamation. Participants attending school at the time of the interviews are referred to as pupils. Those who had been permanently excluded and who had either not started their educational placement or were attending alternative provision are referred to as young people. Young people in LA1 had been permanently excluded from school, while pupils in LA3 had experienced fixed-term exclusions and attended internal alternative provision. Participants were recruited through schools, pupil referral units (PRUs), and third-sector organisations to capture a range of experiences of exclusion. While the initial aim was to recruit parents/carers from core schools this proved to be challenging. Instead parents/carers were recruited through partners in the third sector and social media and as a result were from across Wales.

Table 1 summarises the participant sample, while Table 2 outlines the exclusion profile and development history of the core schools in the case study local authorities.

The wider research team developed semi-structured interview schedules for pupils, school staff, and parents collaboratively, then refined and piloted them before data

Table 1. Sample.

Participant group	Role/ status	Number
School staff	School leaders	5
	Teachers	12
	Additional Learning Needs Coordinators (ALNCOs) and pastoral leads	21
Total school staff		38
Young people	Pupils/ young people aged 15 – 16	15
Parents	Parents/ carers	12
	Total participants	65

Table 2. Case-study school characteristics.

Case-study area	Exclusion profile	School history
LA1	HTE	Formed through amalgamation of two or more existing schools
LA1	LTE	Faith school: moved into a new building without an amalgamation.
LA2	LTE	Faith school: moved into a new building without an amalgamation.
LA3	HTE/LTE schools	Schools formed through amalgamation of two or more existing schools

collection. Pupil interviews explored experiences of schooling, exclusion, alternative provision, fairness of their exclusions and future aspirations. Staff interviews focused on how pupils at risk of exclusion were identified and supported, the barriers encountered and the involvement of other professionals. Parent/carers interviews explored their child's schooling, support and exclusion. Across the interviews, participants were also asked about their experiences of school environments and buildings, allowing them to describe how space, routines and infrastructure shaped behaviour, relationships and support.

The interviews were completed between December 2021 and January 2023. Most of the interviews took place during the COVID-19 pandemic. All interviews with school staff and the pupils in LA3 were conducted on the school site. In LA1, the interviews with young people were held in some form of alternative provision, including a youth club. As previously mentioned, all the pupils interviewed attended a school developed as part of the 21st Century Schools Programme. The Excluded Lives project team members visited all the schools the pupils we interviewed had attended. Interviews generally lasted between 45 and 90 min, although duration varied according to participants' circumstances and the level of detail they wished to provide.

Trustworthiness was strengthened by piloting interview schedules, triangulating across pupils, staff and parents, discussing coding decisions with the wider team, and using participant quotations to illustrate themes.

Analysis combined deductive and inductive thematic approaches. Initial coding was organised around the research questions and sensitising concepts drawn from panopticism, particularly visibility, self-regulation and economy of power. The analysis remained open to patterns arising from participants' accounts that were not predetermined by the theoretical framework. Codes were compared across participant groups and cases and developed into themes concerning transitional and unstructured spaces, surveillance and visibility, environmental responses to dysregulation, school scale and access to relational support. Following Braun and Clarke (2006), the analysis involved familiarisation, deductive and inductive coding, and theme development through comparison across cases and participant groups.

Findings

The data revealed three recurring dimensions of the relationship between school infrastructure, pupil behaviour and exclusion. First, behavioural difficulties were often concentrated in corridors, communal areas and periods of movement rather than in lessons themselves. Second, schools differed in whether they treated dysregulation primarily as a problem located within the pupil or altered the environment around them. Third, the scale of large secondary schools affected sensory demands, supervision and pupils' access to familiar adults.

Research question one: do schools create a panoptic environment, where visibility leads to tensions between the competing needs of staff who monitor pupils and the pupils who engage with the environment?

Theme 1: Behavioural incidents were predominantly concentrated within transitional and unstructured spaces

Across the interviews with staff, parents, young people and pupils, the same locations and unstructured times emerged when behavioural incidents were being discussed. The locations were corridors, toilets, stairwells, and the times were lunchtime, breaks and the movement between lessons.

He struggles with unstructured time. So, he's the type of student that will truant, but also going from lesson to lesson will seem to find something to get himself stuck into, be that running around the corridors and bursting into another classroom and disturbing that. (Pastoral Care Lead, LA1, HTE school)

The majority of the exclusions are things that happen at lunchtime ... that's always been his biggest problem, that sort of free time and when he's unstructured. (Parent 6, North Wales)

Lunchtime practices emerged as another example of how behaviour was shaped by the organisation of school space. Rather than focusing solely on individual pupils, participants described how changes to routines, supervision and the use of communal areas appeared to influence behaviour.

We had two lunches. So, we had Key Stage 3 lunch, Key Stage 4 lunch. it was like the OK Corral down there ... there would be more intimidation, there would be more bullying, and they'd be scrapping every day ... A Year 7 child comes in, they've got their own seat in the canteen ... All those areas are staffed. So, the chances of any bullying or intimidation or any assaults like that happening are slimmed down as much as we possibly can. (Headteacher, LA3 HTE)

These accounts suggest that some pupils could meet behavioural expectations where routines, adult presence and spatial boundaries were clear, but struggled when those supports were reduced. The pattern therefore locates at least part of the difficulty in the organisation of transition and unstructured time, rather than solely in the disposition of the pupil.

Theme 2: the dual role of visibility in constraining and provoking behaviour

The data suggest that school infrastructure such as open balconies, central stairwells, and multiple levels made pupils' behaviour more visible. This helped staff supervise students, but it did not always lead to better behaviour. The data showed that having an audience could make incidents worse because pupils' actions were more noticeable and drew more attention.

I threw a full bottle of energy drink off the top floor, and it landed in some kid's curry. (Pupil, Participant, 3, LA3 HTE)

*They were really rude ... and kicked me out, all because I was hanging off the bannister because they ***** me off. (Young person, Participant 9, LA1)*

Theme 3: large layouts produced both surveillance and spaces of escape

Staff also described a tension between the intention to oversee pupils and the practical difficulty of monitoring complex buildings. One pastoral lead described pupils running

around a square building that ‘just goes round and round’ (Pastoral Care Lead, LA1, HTE school), while an ALNCO reported that a pupil spent much of his time ‘wandering around the school and hiding from members of staff’ (ALNCO, LA1, LTE school).

We don’t tolerate corridor wandering ... vulnerable youngsters not being supervised. (Head teacher, LA1 LTE)

Most lessons, I was asked to stand in the hall (Young person, Participant 12, LA1).

The same corridor was described both as a risk and as a location used within behavioural interventions.

Research question two: are school staff more focused on fixing pupils who struggle to self-regulate their behaviour rather than improving their environment?

Theme 1: some responses located the problem within the pupil

The data from pupils, young people and parents showed instances in which repeated sanctions, isolation or exclusion were used without the support they believed had been identified as necessary. In these cases, behavioural control appeared to take precedence over adjusting the learning or sensory environment. One pupil who explained that she had mental health difficulties described being placed in the isolation room, a parent of a child with ADHD described how he would leave the classroom if things were getting difficult for him:

As soon as I walked in there I literally started crying. I said, ‘I can’t sit down, I can’t sit down’ ... I had to sit in there for four hours, but I couldn’t do that. (Young person, Participant 13, LA1).

If something was going on in a lesson ... he would leave and walk around the school. I see that as him removing himself. School’s seen that as he’s a health and safety risk. (Parent 9, South Wales)

Both accounts show how behaviour associated with distress or self-regulation could be recast as misconduct or risk. In practice, this meant that pupils received sanctions for how they responded to different situations, while the needs or conditions underlying those responses received little attention.

Theme 2: environmental adjustments to support self-regulation

Conversely, some schools changed their spaces, staff, and routines to prevent sanctions and exclusions. Participants described quiet rooms, nurture provision, timeout cards and smaller groups with a lower pupil-to-teacher ratio:

We also have something called the Base, and this is for ALN pupils, and they’ve got a timeout card. So, if they feel they’re going to get themselves into trouble ... they can go there, calm down and go back into the classroom. (Teacher 8, LA3, HTE school)

We were given a timeout card; if I needed a ten-minute break in a class I could do that. (Pupil 1, LA3, HTE school)

These adjustments gave pupils space to step away, settle themselves and return to the lesson without receiving a sanction. Rather than responding after behaviour had

escalated, staff reduced pressure and offered support early enough to prevent the escalation.

School staff acknowledged that the school environment could lead to behavioural difficulties for some pupils. The head teacher of the LTE excluding school in LA3 acknowledged disproportionately high exclusion rates among pupils with additional learning needs (ALN), attributing part of the issue to the physical design of the school.

We've got two classrooms at the back, called our pods. They've been used for maths and English. The idea originally was that ALN would be in the middle of the school on the first floor. It's too difficult in the form of sensory issues for children. There's too much going on there. It's a thoroughfare with the main teaching. (We are) developing seven to eight classrooms, we've got very specific uses for all the rooms, and we're going to put a garden around there with a fence so it's more contained. (Head teacher, LA3 LTE)

Theme 3: supported spaces depended on relationships and reintegration

Separate spaces did not support inclusion on their own. What mattered was whether pupils remained connected to trusted adults, continued with their learning and had a clear route back into the wider life of the school.

He had the room that he could go to when he was in difficulty ... It allowed them to build bridges. (Parent 11, LA1)

The teachers weren't enough support for me and that, I just misbehaved and that but it wasn't misbehaving for me, I just couldn't cope in lessons. (Young person, Participant 10, LA1)

They don't help you, they don't try and understand you, they all just jump to conclusions and they'll label you as a bad kid ... you can't really ... make sure all teachers are familiar with their students ... you can't do that in massive schools where there's what, three thousand people. (Young person, participant 12 LA1)

Several young people also described unmet learning and support needs. Participant 11, who had a diagnosis of dyslexia, ADHD and autism, reported receiving little support in mainstream schooling despite her additional learning needs. Such accounts suggest that, from some pupils' perspectives, behavioural control could be prioritised over identifying and responding to underlying needs.

They didn't give me any support ... I've got dyslexia, ADHD, and autism ... I was in mainstream ... they didn't do anything. (Young person, Participant, 11, LA1)

I went back to school at the end of the day for my friends. Everyone was coming up to me and saying 'you are permanently excluded'. I asked the teacher and she said, 'yeah you cant come in no more'. (Young person, Participant 12, LA1)

The data showed that being removed from the classroom did not always mean being excluded from learning. Some pupils were able to work in a quieter, more supportive space and return to the mainstream classroom when they felt able to do so. Where pupils were left alone or contained, it became another form of exclusion within the school. The key difference was whether the removal helped the pupil participate in learning again or removed them from view.

Research question three: how do pupils and staff experience school size and scale, and what implications do these experiences have for behaviour and exclusion?

Theme 1: increased scale leading to increased sensory and organisational demands

Participants described large secondary schools as distinct settings, rather than scaled-up versions of smaller secondary schools. High pupil numbers, crowded corridors and persistent noise created additional demands that pupils had to manage throughout the school day.

We are a super school: there's one thousand three hundred children – it's very overwhelming for an adult, never mind a child. (Teacher 7, LA3, HTE school)

He's uncomfortable with a big setting. He's uncomfortable with the noise, the proximity of people. (ALNCO, LA2, LTE school)

For pupils with learning difficulties, often undiagnosed, it's a big step up. This is a very large environment, with classes of perhaps 30-plus pupils, and there are some pupils we just can't engage in a classroom setting initially. (Teacher 2, LA3, LTE school)

Theme 2: large schools complicated supervision and relationships

It's an impossible size to monitor, so if you want to go missing, it's really easy to go missing. (ALNCO, LA3 LTE)

The extract above questions the idea that large, highly visible schools are easier to supervise. Although they can accommodate more pupils, there are many rooms, corridors and toilets also gave pupils more places to avoid staff. This concern was echoed by a young person who described being 'in a classroom with thirty odd kids' and attending a school with 'another thousand kids', concluding that 'there's always so much, it just wasn't for me' (Young person, Participant 9, LA1). Participants were also concerned that bigger schools would make it harder to 'maintain those relationships' (Teacher 2, LA3, LTE school), which they saw as essential. The data suggest that any gains in efficiency may come at a cost.

Theme 3: Smaller settings supported calmer behaviour and better engagement

Participants consistently linked smaller classes and more contained settings with better engagement, less truancy and calmer behaviour.

He now has a much smaller class ... only seven students ... he doesn't truant anymore. (Pastoral Care Lead, LA1, HTE school)

There's only four or five of us to one class; I've been up there where it's like 30 and one teacher. (Pupil 1, LA3, HTE school)

When he was thriving, he was in a school class of six to eight. (Parent 12, LA2)

Overall, the findings suggest that school infrastructure influenced visibility, movement, sensory exposure and access to support, shaping where behavioural difficulties occurred and how they were managed.

Discussion

RQ1: Do schools create a panoptic environment, where visibility leads to tensions between the competing needs of staff who monitor pupils and those who engage with the environment?

The findings suggest that behavioural difficulties were often concentrated in transitional and unstructured spaces rather than in classrooms alone. Corridors, stairwells, toilets, lunchtimes and movement between lessons were repeatedly identified across pupil, parent and staff accounts. This is important because secondary schools place particular demands on pupils as they move through large buildings and shared spaces throughout the day. How pupils move through a school can shape what happens in shared spaces. Tanner (2009) identifies circulation routes as an important part of school design, particularly in supporting movement around the building. When these spaces become crowded, however, they can be harder to manage. Rolfe et al. (2022) found that crowded communal areas were linked to greater conflict and more frequent staff intervention, while Aminpour (2022) draws attention to the added effects of noise, crowding and unwanted physical contact on social interaction.

The findings also show that management practices can alter how the same physical environment is experienced. Staggered lunches, defined seating, staff presence in communal areas and clear routines for movement reduced pupil density and made supervision more manageable. These practices did not change the physical structure of the building, but they changed how pupils moved through and used the space. This supports Daniels et al.'s (2019) argument that the effects of school buildings cannot be separated from the social and organisational practices through which they are used. School design and school management therefore operate together: the same space may create different behavioural pressures depending on how movement, supervision and access are organised.

RQ2: Are school staff more focused on fixing pupils who struggle to self-regulate their behaviour rather than improving their environment?

The findings showed different approaches to pupils who struggled to self-regulate their behaviour. In some cases, behaviour linked to distress or difficulty coping with the school environment was treated as misconduct. Pupils and young people described leaving classrooms, needing time away or struggling in isolation, but these responses could result in further sanctions. This suggests that behavioural difficulties were sometimes understood as a problem within the pupil rather than a response to the conditions around them.

Conversely, some schools made changes to the environment to help pupils manage their behaviour. These included quiet rooms, timeout cards, nurture provision and smaller groups. The aim was to give pupils space to calm down and return to learning before difficulties escalated. Porter (2018) highlights that aspects of the school environment can create barriers for some pupils, while van Liempd et al. (2020) suggest that smaller and quieter spaces can help pupils manage social and sensory demands. The findings from this study show how relatively small changes to the space and routine could support pupils to remain engaged in education.

The findings also highlighted particular challenges for pupils with ALN. One head teacher reported disproportionately high exclusion rates among pupils with ALN and described the existing location of ALN provision as unsuitable because of noise, movement and sensory demands. However, the data do not show that the design of the school caused these higher exclusion rates. Rather, they suggest the possible relationship between the school environments, difficulties with self-regulation and the use of sanctions. Where pupils struggled with noise, crowding or sensory overload, behaviour could be interpreted as non-compliance rather than as an indication that further support or environmental adjustment was needed.

RQ3: How do pupils and staff experience school size and scale, and what implications do these experiences have for behaviour and exclusion?

The findings do not show that larger schools have higher exclusion rates. Schools differed in leadership, pupil intake, and available support, and this study was not designed to statistically test the relationship between school size and exclusion. The data showed that crowded corridors, noise, large classes and close contact with other pupils could make school more difficult to manage, particularly for pupils moving from smaller primary or specialist settings. Daniels et al. (2019) found that pupils could also become less connected to school during the transition to secondary education.

Smaller settings were often described as calmer and easier to manage. Pupils, young people, parents and staff linked smaller groups with better engagement and, in some cases, less truancy. Barrett et al (2019) similarly suggest that smaller schools can support stronger relationships and engagement, particularly for disadvantaged pupils. These findings do not show that smaller schools are always better. What appeared to matter was lower pupil density, fewer sensory demands, closer contact with staff and routines that were easier to manage. For pupils who found large mainstream environments difficult, these features could make participation in school easier.

The findings have implications for the design and use of secondary school buildings. Attention should not be limited to classrooms. Corridors, stairwells, canteens and other communal spaces formed an important part of pupils' daily experiences and were often where behavioural difficulties occurred. School design should therefore take account of pupil numbers, movement, noise and access to quieter spaces. How these spaces are managed also matters. Staff presence, clear routines and access to familiar adults could reduce some of the pressures associated with large and busy environments. Pupils and young people should be involved in the design and evaluation of school spaces alongside staff, particularly pupils with ALN and those at risk of exclusion.

More broadly, the findings suggest that panopticism is useful for understanding how visibility, surveillance and the organisation of school space shape behavioural regulation. However, the data also indicate that behaviour and exclusion cannot be understood solely through observation and control. Participants frequently emphasised the importance of trusted relationships, access to support, sensory demands and feelings of belonging. These factors suggest that the effects of school environments are mediated not only through visibility but also through the relational experiences of pupils.

There are several limitations to this study. The data were collected as part of a wider study of school exclusion, and school infrastructure was one topic within broader interviews about behaviour, support and exclusion. Some participants therefore discussed

school space in more detail than others. The study also drew on a small, purposively selected sample in Wales, so the findings cannot be assumed to represent all secondary schools or pupils. Recruitment through schools and alternative provision may also have influenced whose experiences were included. The analysis was based mainly on participant accounts rather than observations of school spaces, technical assessments of buildings or comparable school level data on size and exclusion.

Conclusion

This study examined how secondary school infrastructure shaped pupils' and staff experiences of behaviour, behavioural regulation and practices associated with exclusion. Drawing on Foucault's concept of panopticism and qualitative data from the Excluded Lives project, the study found that visibility and surveillance did not automatically lead pupils to regulate their behaviour. While increased visibility could support staff supervision, visible spaces could also provide opportunities for pupils to attract attention, test authority, or resist expectations.

The data showed that the school size alone did not cause behavioural difficulties or higher exclusion rates. Rather, participants described how conditions associated with larger settings, including crowding, noise, sensory demands, difficulties with supervision and reduced access to familiar adults, could make school harder to manage for some pupils. In contrast, smaller relational environments were described as calmer and more supportive, particularly where pupils had easier access to staff and were taught in smaller groups. The findings therefore suggest that scale matters through the conditions and relationships associated with it, rather than because larger schools are inherently more exclusionary.

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Ethical approval

Ethical approval was obtained from the University of Oxford Departmental Research Ethics Committee (DREC), Reference Number CUREC ED-C1A-20-057. Due to ethical concerns, supporting data cannot be made openly available.

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