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Transforming Teaching and Learning

NORTHERN IRELAND EDUCATIONAL RESEARCH QUARTERLY

Volume 3, April 2026

Research on Classroom Climate and Behaviour Management

QUEEN'S UNIVERSITY BELFAST
SCHOOL OF SOCIAL SCIENCES, EDUCATION AND SOCIAL WORK

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Editorial Introduction

Welcome to the third edition of this *Educational Research Quarterly*, which looks at recent research on classroom climate and behaviour management.

It is no secret that getting behaviour right is a pre-condition for teaching and learning. If we don't have a calm and orderly classroom, attention and time on task will suffer, which will harm not just the learning outcomes of pupils, but their well-being and sense of safety. However, it is of course not just behaviour that matters. Warm relationships and positive motivation are equally important. That is why we are using this third edition of the Research Quarterly to look at both.

The edition starts with some fascinating research by Agnieszka Graham and Teresa McCormick on mind-wandering, a common but infrequently discussed factor in the classroom, and how we should respond to it as teachers. In the second paper, Tom Bennett takes a critical look at restorative justice as a classroom management approach, and how useful it really is (or more accurately isn't) in the classroom. In the third paper, Beatrijs Vandenkerckhove, Sofie Morbée and Maarten Vansteenkiste look at motivation, and in particular at the distinction between 'wantivation' and 'mustivation', two intriguing concepts which the authors will explain in their piece, and in the final paper I review literature on teaching routines.

As always, I hope these papers stimulate and challenge and are of interest to you as a practitioner in the classroom. Please do get in touch with any questions or ideas for future issues.

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When Students Look Attentive but Aren't: What Educators Need to Know About Mind-Wandering

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Mind-wandering is one of the most pervasive yet overlooked challenges in modern classrooms. Most educators will be familiar with the student who looks attentive, looking at the whiteboard or nodding along, only to discover, when questioned, that they have little understanding of what has just been said. These moments are often interpreted as simple lapses in concentration or a lack of motivation, yet research suggests they often reflect a fundamental and inescapable feature of human cognition: people's tendency to engage in frequent mind-wandering (Smallwood & Schooler, 2006, 2015). Indeed, mind-wandering is estimated to occupy between 30% and 50% of our waking hours (Killingsworth & Gilbert, 2010; Seli et al., 2018). For educational professionals, understanding the potential causes and consequences of mind-wandering and how it differs from distraction by external factors such as noise or other pupils, is essential for supporting learning and improving academic outcomes.

Defining Mind-Wandering

Mind-wandering refers to a shift of attention away from an immediate task toward internally generated thoughts that are unrelated to what is happening in the external environment. When this occurs, responsiveness to incoming information is reduced because attentional resources are redirected inward (Smallwood & Schooler, 2006). Unlike focused thinking, where attention is deliberately aligned with a specific goal such as solving a maths problem or following classroom instructions, mind-wandering involves thoughts that arise independently of the task at hand. These thoughts often concern personal goals, past experiences, or imagined future events, a process sometimes described as "mental time travel" (Smallwood & Schooler, 2015).

Research has identified two broad forms of mind-wandering. **Unintentional mind-wandering** occurs when attention drifts involuntarily, despite an individual's intention to remain focused (Seli et al., 2016a, 2016b). People are often unaware that their mind has wandered until they realise they have lost track of what they were doing (Schooler et al., 2011). This form is particularly common during tasks that require sustained effort or concentration and is typically experienced as disruptive.

Intentional mind-wandering, by contrast, involves a conscious decision to disengage from a task in order to think about something else (Seli et al., 2016a). This tends to occur when tasks are repetitive, unchallenging or unengaging, but can also arise during periods of problem-solving. In adults, intentional mind-wandering is sometimes associated with beneficial outcomes, such as creative insight (e.g., Baird et al., 2012).

When it is purposeful and well-timed, it may allow individuals to connect ideas in novel ways or relieve cognitive fatigue (e.g., Soemer et al., 2023).

Importantly, in adults, these two forms of mind-wandering show different relationships with learning. Unintentional mind-wandering is consistently linked to poorer immediate comprehension and weaker long-term academic outcomes, such as exam performance, whereas intentional mind-wandering appears less detrimental (e.g., Wammes et al., 2016). Unintentional lapses are often interpreted as failures of executive control, in which individuals are unable to suppress intrusive internal thoughts. Intentional disengagement, in contrast, may reflect a rational judgement that the current task is not worth the cognitive effort required or that it is possible to do the task to an adequate level without paying full attention (McVay & Kane, 2012; Randal et al., 2019).

While adults report experiencing both forms of mind-wandering, research (including our own) suggests that children and early adolescents rarely report mind-wandering as intentional (Bianchi & Risko, 2022; Cherry et al., 2022). This suggests that attentional lapses in classroom settings are largely spontaneous and uncontrolled during childhood. However, our understanding of children's subjective experiences of mind-wandering remains limited. One possible explanation for the low levels of reported intentional mind-wandering in children is a lack of metacognitive insight (i.e., awareness and understanding of their own thinking processes), which may limit their ability to recognise thoughts as deliberate. It is also possible that children are reluctant to admit to intentionally disengaging from learning activities.

Mind-Wandering vs. Distraction: Why the Distinction Matters

For educational professionals, it is important to distinguish between mind-wandering and distraction, as these reflect different attentional processes and therefore call for different pedagogical responses.

Distraction is typically exogenous, meaning it is triggered by something in the external environment. Common classroom distractors include background noise, the movement of peers, or visual clutter. Because distraction is often observable (e.g., a child turning their head toward a sound) it can be relatively easy for teachers to identify and manage by modifying the environment, such as reducing noise or minimising visual distractions.

Mind-wandering, by contrast, is endogenous, originating from within the learner's own mind. It is a covert phenomenon and therefore much harder to detect. A student whose mind is wandering may appear attentive while their thoughts are focused elsewhere; as a result, outward signs of engagement do not necessarily reflect meaningful processing of information.

This distinction matters because inattention is often assumed to result from external distraction, and mind-wandering can be misinterpreted as boredom, lack of effort, or even disrespect. Such misinterpretations risk obscuring the true underlying causes, as

well as the fact that mind-wandering is a normal and inevitable feature of human cognition (it is effectively impossible to sustain attention continuously). Recognising this allows educators to reframe mind-wandering not as misbehaviour or disengagement, but as part of the natural ebb and flow of attention.

The Prevalence and Impact on Children's Learning

Recent research indicates that mind-wandering is a frequent feature of children's cognitive experience, although reported prevalence rates vary depending on the context in which attention is measured. Notably, rates appear to increase substantially in classroom settings. For example, our recent study of 8 to 9-year-old children found that students were off-task for approximately 45% of instructional time, with nearly half of this time attributable to mind-wandering and the remainder to external distraction (Cherry et al., 2025). These findings suggest that internally generated attentional lapses are at least as common as environmentally driven distractions during classroom learning.

Importantly, mind-wandering has been consistently identified as a negative predictor of learning outcomes in children and adolescents (Smallwood et al., 2007). Across multiple studies, higher rates of mind-wandering independently predict poorer memory recall and reduced comprehension, as reflected in lower performance on tests administered after learning activities (Szpunar et al., 2013b; Wammes et al., 2018). Beyond immediate learning effects, mind-wandering may also have longer-term consequences. In late adolescence, frequent mind-wandering has been shown to predict a poorer academic self-concept (i.e., students' beliefs about their own learning capabilities) which can in turn reduce motivation and engagement with academic tasks (Desideri et al., 2019).

The emotional correlates of mind-wandering are also relevant for educational contexts. In adolescents, higher trait levels of mind-wandering have been linked to lower mood, greater perceived stress and reduced life satisfaction (Mrazek et al., 2013), highlighting that mind-wandering is not purely cognitive but closely connected to emotional well-being. We have also found that in children, lower mood has been associated with a greater tendency to mind wander, particularly with thoughts focused on the past (Teague et al., 2025). These studies are correlational, so the direction of causality is unclear: low mood may increase susceptibility to mind-wandering, frequent mind-wandering may affect mood, or the relationship may be bidirectional. From an educational perspective, however, the practical implication is clear: children experiencing low mood may be especially vulnerable to mind-wandering during learning.

Encouragingly, certain factors appear to protect against mind-wandering. Situational interest plays a particularly powerful role: when children find learning materials engaging or personally meaningful, they are less likely to mind wander and subsequently perform better on memory tasks. Similarly, high intrinsic motivation reduces spontaneous mind-wandering by encouraging students to allocate cognitive

resources to the lesson rather than to internally generated thoughts. Indeed, we have found that children's levels of motivation predict their level of learning because children who are more highly motivated mind wander less (Cherry et al., 2024, 2025).

Managing Mind-Wandering in Educational Settings

While it is not possible to eliminate mind-wandering entirely, research has identified a number of proactive and reactive strategies that may help reduce its frequency and mitigate its impact in the classroom. Here, we focus on two approaches that appear particularly promising, but we should emphasise that more research is needed on children's mind-wandering in order to establish what is most effective.

Supporting children's understanding of the relationship between attention and learning

One important strategy might involve helping children develop an explicit understanding of how mind-wandering (and attention more broadly) affects learning. While it seems obvious to us as adults that mind-wandering can have a negative impact on learning, we cannot assume that younger children fully grasp this link.

In our recent work (currently in preparation), we used a vignette-based task in which children were presented with short scenarios depicting characters who were either mind-wandering or paying attention to the task (Figure 1). Children were asked to make forced-choice judgements about the likely consequences of these attentional states for the characters' learning. We found that explicit knowledge of the relationship between paying attention and learning improves markedly between the ages of 5 and 8. However, even at age 8, about a quarter of children were unable to correctly identify how mind-wandering would affect learning in the vignette.

Children who demonstrated more explicit knowledge of the link between mind-wandering and learning also reported fewer task-unrelated thoughts during learning activities. This finding suggests that understanding the potential costs of mind-wandering may support better self-regulation in learning contexts. In other words, when children appreciate *why* attention matters, they may be better able to monitor and manage lapses in attention themselves.

These results highlight the importance of *metacognition* (i.e., thinking about one's own thinking) as a key skill for managing inattention in the classroom. From an educational perspective, this points to the value of moving beyond familiar behavioural prompts such as "put your listening ears on". While such instructions may support group behaviour, on their own they may not help children understand the underlying purpose of attending. Instead, educators may wish to explicitly explain *why* attention is important by linking it to learning (for example, by discussing how listening helps information to be understood and remembered). Framing attention as a necessary prerequisite for learning, rather than simply a marker of good behaviour, may help children develop a better understanding of how to engage effectively in learning.

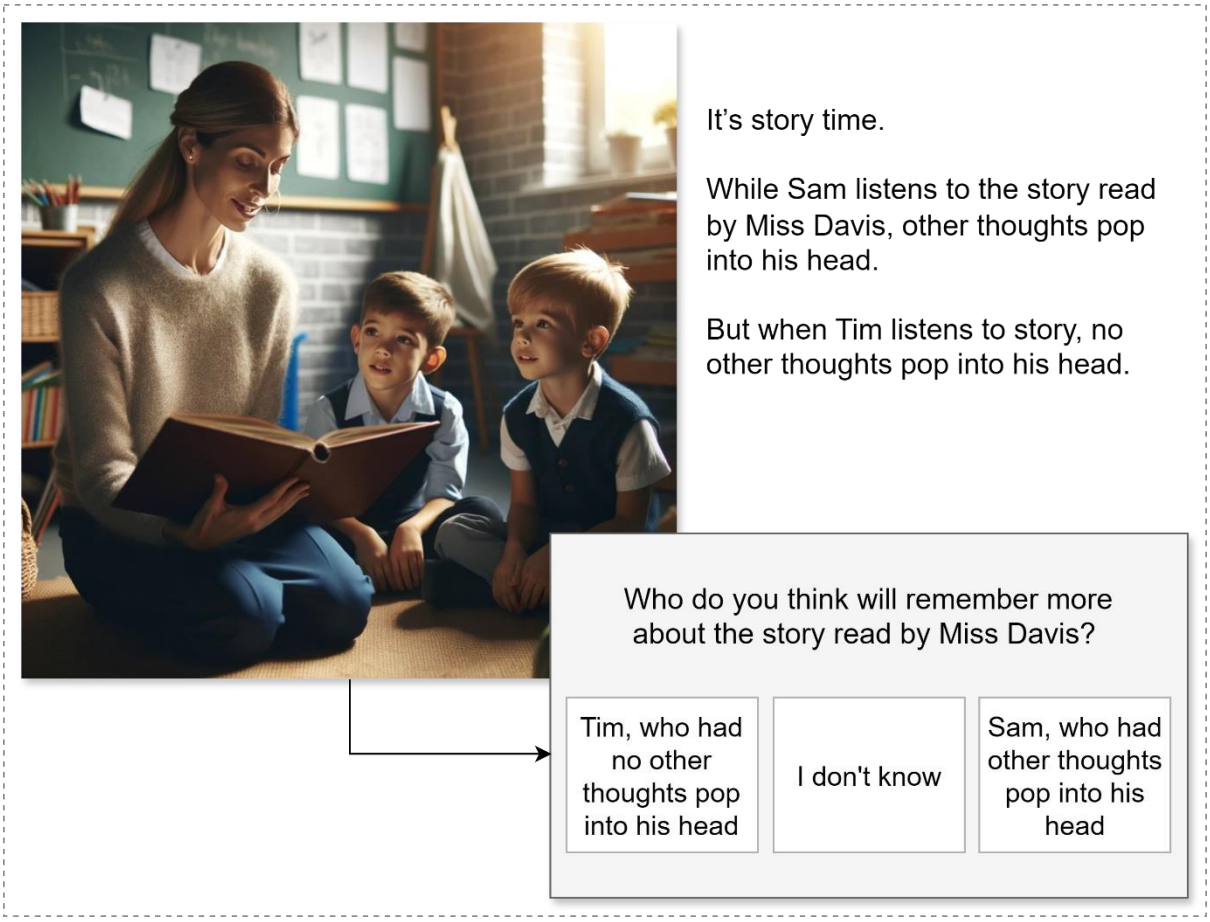

Figure 1 Vignette-based measure of metacognitive knowledge.

Intermittent thought probes or interpolated testing

In the adult and adolescent research literatures, one of the most effective ways to reduce mind-wandering during lectures is the use of interpolated testing (Szpunar et al., 2013a). This typically involves regularly interspersing teaching with brief, low-stakes questions or "pop quizzes". Research suggests that this approach can reduce mind-wandering by up to 20%. Interpolated testing is thought to be effective because it encourages students to continuously monitor their understanding and provides frequent opportunities to re-engage with the material.

A related, and lower-preparation, approach involves interspersing teaching with *thought probes*. Rather than testing content knowledge, thought probes invite students to reflect explicitly on their current attentional state. For example, children might be asked whether they were on task or off task, and if off task, whether this was due to mind-wandering or external distraction.

In practice, this can be implemented very simply. For instance, by briefly displaying a slide or card asking, *"What were you thinking about just now?"*. Our own research suggests that children as young as 6 can meaningfully answer questions about what they were thinking about if they are asked in simple terms, although it is important for children not to think there are 'wrong' answers to this question. Such prompts may help

children develop greater awareness of their own attention (sometimes referred to as *meta-attention*), although this possibility has yet to be established in studies.
At a minimum, however, thought probes provide students who are mind-wandering with a clear opportunity to redirect their attention back to the learning activity. They may also offer teachers valuable informal feedback, acting as a useful indicator of attentional engagement within the classroom at different points in a lesson.

Conclusion

Mind-wandering is not a sign of a "lazy" or unmotivated student. Rather, it is a complex cognitive state that reflects the operation of executive control in the face of competing internal and external demands. For educational professionals, the goal should not be to eliminate mind-wandering entirely. Research with adults suggests that, in some contexts, mind-wandering can support creativity and problem-solving, so attempts to eradicate it altogether are both unrealistic and counterproductive.

Instead, the focus should be on helping students develop the awareness and agency needed to manage their attention effectively. By explicitly teaching children about attention, supporting them in recognising when their minds are likely to wander, and implementing strategies such as interpolated testing and thought probes, educators can help students learn to navigate their internal stream of thought in ways that support learning rather than hinder it.

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Restorative Justice: it doesn't restore and it isn't just

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Introduction

Restorative Justice (RJ) has become one of the most widely promoted approaches to behaviour management and school discipline in recent years. It is easy to see why it is attractive: it promises to be an alternative to systems based on rules and sanctions, promising to repair relationships, reduce disruption and promote a more cohesive and emotionally intelligent school community where participants behave well not out of fear of being caught, but because they understand why they should not disrupt or offend others. In some schools it is used as an adjunct to existing school discipline policies; in others it has replaced them entirely and become central to the school's entire approach. It is a strategy that has been broadly adopted in multiple countries throughout the world, including Northern Ireland.

Unfortunately, this adoption has been a terrible mistake. The evidence base underpinning the entire model is weak, and the evidence of positive impact is weak and partial. On the contrary, evidence for the damage that it causes abounds, both at a school and a system level. It fails on its two key claims: it doesn't restore relationships in a meaningful way, and it doesn't promote justice in a measurable sense. In fact, it typically does the opposite.

Motivated reasoning

Despite the widespread adoption of the RJ model, the evidence base for it is surprisingly fragile. Perhaps this should not be surprising: schools leaning into empirically credible evidence bases has been a more recent phenomenon and has occurred unevenly throughout the international educational sector. Many initiatives are selected based on their ideological or political implications, or reflect the tastes of existing school leaders, rather than emerging from an understanding of evidence.

Most studies that support RJ are small-scale, short term and methodologically very limited (Song & Swearer, 2016; González, 2015). They very often rely on self-report of school climate rather than objective measures of behaviour. As some have pointed out (Coe et al., 2014), asking participants of a program that they have invested time and money into whether they think a program has 'worked' is a recipe for bias and motivated reasoning. Many studies also lack comparison groups, making it impossible to discern if any reported behavioural changes are down to the RJ intervention or other factors. Even when more rigorous standards are applied to the evaluation, results are very mixed and appear to be heavily reliant on circumstances of context (e.g. favourable socio-economic demographics) that are hard to meaningfully scale. A large-scale evaluation found no overall reduction in suspensions (Augustine et al., 2018), and systematic

reviews highlight variability and weak causal evidence (Darling-Hammond et al., 2020). Any reported improvements appear to be hard to consistently demonstrate over longer periods of time.

These interventions do not happen in a vacuum, and they are not harmless. What we do in schools is always a trade-off: when we invest in one activity with weak evidence bases, it displaces other, more effective activities we could be doing. When schools operate systems of RJ, it takes the place and resources of other strategies, including ones with far better evidence bases of efficiency and utility.

The Design Flaw

RJ is built on the premise that students misbehave because of underlying unmet needs, and that by discussing their misconduct in a structured way, their future behaviours can be improved. Of course, there is much to advocate in encouraging students to reflect on their behaviour as a part of a broader process. But the key concept here is 'part': the claim that this should embody the majority or the whole of the process of school response is deeply unserious and ultimately disastrous. Much or most student misbehaviour is not the product of reflection, reasoned consideration, or strategy: it is habitual, social, automatic and heavily influenced by the social dynamics of the group (Wood & Neal, 2007). For example, the desire to impress one's peers, to fit in, to shock or amuse, to avoid work or effort, to avoid failing, to cause a reaction, or to feel important. The reason why so much misbehaviour is like this is not because students are thinking hard about the broader consequences of their actions, but because it is easy and often rewarding to behave in this way, and there are limited signals from their environment that they should *not* act in this way, including clear expectations and firm boundaries.

RJ is a triumph of optimism over pragmatism. It invites students to reflect on their actions; but the problem occurs when they do, and find no fault in them. It assumes that students have the same ethical apparatus or ambitions as the mediator, and they only need to have it pointed out for improvement to begin; but they do not, and people often have very different ethical mental models. It assumes that they possess the conscientiousness to feel empathy for others that they have hurt or wronged, when this is not often the case.

Structured and reflective conversations with students who have misbehaved is a valuable aspect of a school's processes, but it has limited value *by itself*, and limited situations where it offers utility. Behaviour is often shaped by the environment one finds oneself in rather than strategy (Wood & Neal, 2007). People are far less likely to break the local speed limit when there are clear signs, others visibly obeying the law, or working speed cameras (Simonsen et al., 2008; EEF, 2019). By contrast, RJ consequences are often also applied retrospectively after the event, and occur inconsistently, when we know that these factors are much less likely to influence future behaviour (Kazdin, 1982).

Misbehaviour is seen by some as communicating an unmet need of some form. But this is unfalsifiable. It's too broad a definition to be meaningful. Plus, it neglects to address whether all needs *should* be met in the first place: if a child is unhappy at being asked to put effort into their classwork, their avoidance may demonstrate the need to feel comfortable; but supplying the object of that need—play—might be exactly the opposite of what they need in order to learn. Just because we might understand the reason for the misbehaviour doesn't excuse it or mean that we must satisfy it. *Explaining* behaviour (even when we can) does not mean we should *accept* it. Quite the opposite. Students are highly influenced by group norms, and by immediately obvious incentives and disincentives (Bandura, 1977). If disruption is not quickly and consistently addressed, it tends to increase.

Misbehaviour is also frequently attributed to trauma (and there *is* substantial evidence that trauma affects regulation), but it appears both empirically impossible and ethically dubious to claim that all children are traumatised, or that even a majority of them experience it. The word trauma has experienced considerable definitional drift since its first clinical usage to describe the mental effects of serious head wounds, until now we see it being used to refer to situations as mundane as 'maths trauma' and 'attendance trauma'. But if trauma refers to *everything*, it refers to *nothing specifically*, and the term becomes useless.

More importantly still, the evidence for strategies based on unmet needs or trauma is very weak: anecdotal, small-scale, or measuring several variables simultaneously (Maynard et al., 2019).

The Northern Irish Context

RJ in Northern Ireland (like in many countries) did not emerge from classroom demand, practice, or educational research, no teacher or leader was crying out for this, but as a response to broader issues and debates in society. People in living memory have been searching for alternatives to purely punitive systems of justice and order. RJ, as mentioned, has frequently been seen by its advocates as an alternative to that. After and during the Troubles in Northern Ireland, there was, for many, a breakdown in trust in formal justice systems, and a prevalence of paramilitary punishment practices. Community-based restorative processes were seen by some as a remedy to this, as they sought to mediate serious conflict, prevent violence, and reintegrate offenders when communities were deeply divided by the constantly reopening wounds of the past (Eriksson, 2009).

After the Good Friday Agreement, restorative systems were formalised in the youth justice system, e.g. through youth conferencing under the Justice (Northern Ireland) Act of 2002. There was some evidence of success: high levels of victim satisfaction and some reduction in reoffending (Sherman & Strang, 2007; Department of Justice Northern Ireland, 2022).

In this context, RJ was imported into the school environment. This has been done in a scattered and uneven way rather than rolled out consistently. But the dangers of

transplanting a process from one societal context to another without examining the evidence for doing so are obvious. RJ was used more broadly to address environments where trust was lacking; schools by contrast are environments where attendance is compulsory (not voluntary, like a mediated conversation), expectations need to be clear and consistent, and known and practised by all (rather than the situational and context dependent outcomes of a RJ process).

This well-meant but mistaken adoption of RJ into education has been tracked in every country where it is present, from the USA to the UK. Advocacy has replaced rigour in every territory where it is adopted. Its proponents seem to be so invested in the belief that what they champion is right and just, that they forget to investigate if it has the impact they desire. It is a perfect example of sunk cost fallacy: we have worked so hard to implement RJ, it cannot not work.

Going wrong in the classroom

The weaknesses of the RJ approach are obvious to any practitioner working in an even slightly challenging context and are visible at both a classroom and a school culture level. Consistency declines. More effective systems rely on certainty and predictability, but restorative systems introduce variability. Responses to misbehaviour become dependent on time, place and the personalities of the people involved. This variability itself becomes the norm, and the system fails to be systematic. Students notice this very quickly, and the perception of clear and obvious boundaries and expectations becomes blurred, or non-existent.

Teachers notice this even more quickly, as they become expected to work in a way that demands constant mediation and conversation as the default strategy. This can become overwhelming almost immediately. Running a classroom is highly demanding, and adding a layer of RJ can swamp even the most competent practitioner in a busy room. It also weakens teacher authority, as they become facilitators of dialogue rather than the guardians and enforcers of classroom norms and standards. It is very difficult to sustain this, especially when misbehaviour is anything more than rare.

As students perceive these effects, disruption increases; boundaries are tested more frequently; and classroom norms start to seem optional rather than fundamental. Evidence from large-scale studies supports this view: in New York, where this was rolled out at length, RJ didn't improve disciplinary outcomes, and instead coincided with large increases in absenteeism and behaviour incidents (Marsh et al., 2020). In Scotland, where RJ has been the default for a decade, teacher surveys repeatedly report significant teacher unhappiness around behaviour in schools, particularly because of the lack of good behaviour and the absence of clear consequences for misconduct (NASUWT, 2023).

RJ is not harmless. By definition it replaces frameworks that have demonstrated efficacy in school behaviour cultures, i.e. ones based on clear expectations, high standards, consistency of response and tailored exceptions for those who need them (Simonsen et al., 2008). The standard of evidence for replacing this model should be very high, like

Chesterton's Fence. RJ does not meet this standard. It is not a victimless error to adopt it when it creates environments that are less safe, less fair and less dignified. This decline in the quality of the classroom culture is not evenly spread; it disproportionately harms the least advantaged and the most vulnerable (Education Endowment Foundation, 2019). RJ assumes voluntary participation, but in practice, students are forced to participate, to engage and to accept the outcomes. For vulnerable bullied students forced into, e.g. a 'restorative' conversation with their aggressor, this compounds the harm rather than removes it (Daly, 2002).

RJ has been adopted in Northern Ireland, and many other countries, because it offers an appealing vision of how we can improve student behaviour through dialogue and empathy. But this is not supported by evidence in either design or impact. It is based on a flawed understanding of how challenging classrooms are successfully run. It is notable how many of its advocates are not themselves people working successfully in challenging spaces, but are typically located in academic, administrative, or privileged roles, distant from the classrooms they seek to direct. The challenges that face practitioners in challenging environments in Northern Ireland would be better addressed by acknowledging that RJ is a boutique, rather than a mainstream strategy solution, and by learning from environments where challenging behaviour is minimised effectively.

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Supporting Deep-Level Learning and Sustainable Participation in the Classroom: The Critical Role of 'Wantivation' versus 'Mustivation'

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Teachers use a variety of strategies to motivate students. These strategies include aligning course material with student interests, providing high-quality instruction, employing guilt trips and threatening students with additional assessments to ensure compliance. However, not all of these practices lead to high-quality motivation, deep-level learning and enthusiastic participation in the classroom. Therefore, according to Self-Determination Theory (SDT[1]), a teacher should not aim to increase any type of motivation, but may want to foster high-quality motivation. Said differently: rather than asking the question how much a student is motivated, SDT suggests asking whether a student scores high on "mustivation" (controlled motivation) or on "wantivation" (autonomous motivation)[2]. After introducing these distinct types of motivation, we discuss their differential role in predicting learning, well-being and achievement. Finally, we introduce a range of evidence-based motivational strategies to foster high-quality motivation in students.

"Mustivation" and "Wantivation"

As can be noticed in Figure 1, different types of motivation can be differentiated along a continuum of increasing self-endorsement, ownership and commitment[3]. At the far left, one can find amotivation, which reflects a lack of intention to act, with students passively going through the motions. Amotivation can stem from diverse sources: students may feel unable to achieve desired outcomes because they do not perceive themselves as sufficiently skilled and self-efficacious or because they hold the belief that their effort will not lead to the aspired outcome (e.g., "It does not matter what I do, I will fail anyway!"). Alternatively, a student may devalue the learning content altogether (e.g., "What is the use of this learning assignment? This is meaningless!").

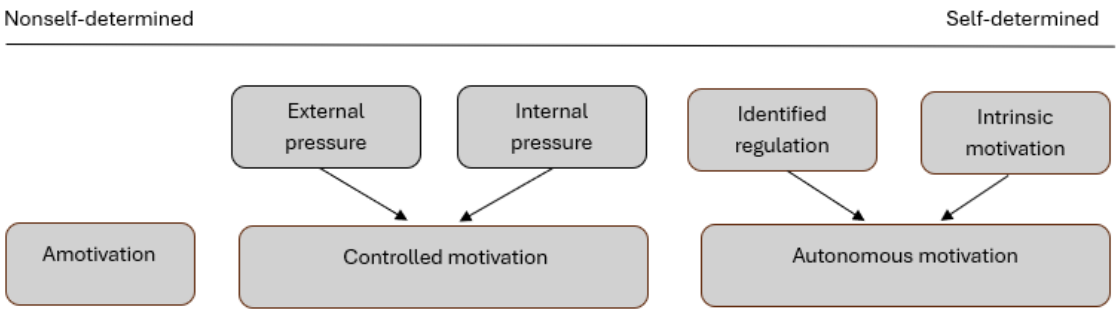
Next on the continuum is controlled motivation or "mustivation", which contains two subcomponents. *External regulation* is perhaps the most recognizable subtype, with students putting effort into their studies to obtain promised rewards, avoid sanctions, please authority figures, or avoid their disappointment. For example, a student may complete an assignment to avoid a reprimand from a parent or to gain the approval associated with a high grade ("My parents will be pleased if I do well!"). In the case of *introjected regulation*, students put themselves under pressure. They put efforts in their studies to protect their ego or to avoid feelings of guilt and shame. For example, a

student might strive for a high score to prove their intelligence ("Come on, you are a loser if you don't do well!"). Although the pressure originates from within, it remains controlling because the student feels they *must* perform to maintain their worth as a person.

Autonomous motivation or "wantivation" emerges when students engage in learning with a genuine sense of volition and choice, and also has two subtypes. *Identified regulation* occurs when a student recognises the personal value or relevance of the learning material. For example, a student may find physics challenging, but because they aspire to study architecture, they identify with the necessity of mastering the subject. They invest effort not because they are forced, but because the knowledge is personally meaningful to their future ambitions ("I know it is important to understand physics if I want to become an architect"). *Intrinsic motivation* involves performing an activity for its own sake, out of interest, curiosity, or enjoyment. Think of a student who keeps puzzling over a difficult math problem because he genuinely wants to understand how it works ("I think this is an interesting challenge"). In both cases, learners are *willing* to engage in the activity. Therefore, we can call it "wantivation" in a more playful way.

This continuum cannot only be applied to understand the motivation of students to invest in their studies, but also to stick to rules and regulations in the classroom (e.g., keeping quiet, handing in homework on time, not using smartphones at school). In this context, not all motivational subtypes are equally applicable. To illustrate, students may find little interest in sticking to the rules but may well be curious about the learning content. Yet, despite a lack of intrinsic motivation, students may understand and consent with the reasoning behind introduced rules, such that they come to internalise and endorse them. They then take responsibility for themselves and their classmates in a more volitional manner instead of out of fear of punishment[4].

Figure 1
The Self-Determination Theory Continuum Showing Types of Motivation (adapted version from Ryan & Deci, 2000)[5]



The Relation between Motivation Quality and Student Functioning

The impact of these motivational types is not merely theoretical. A recent meta-analysis (i.e., a powerful statistical method that combines quantitative data from multiple

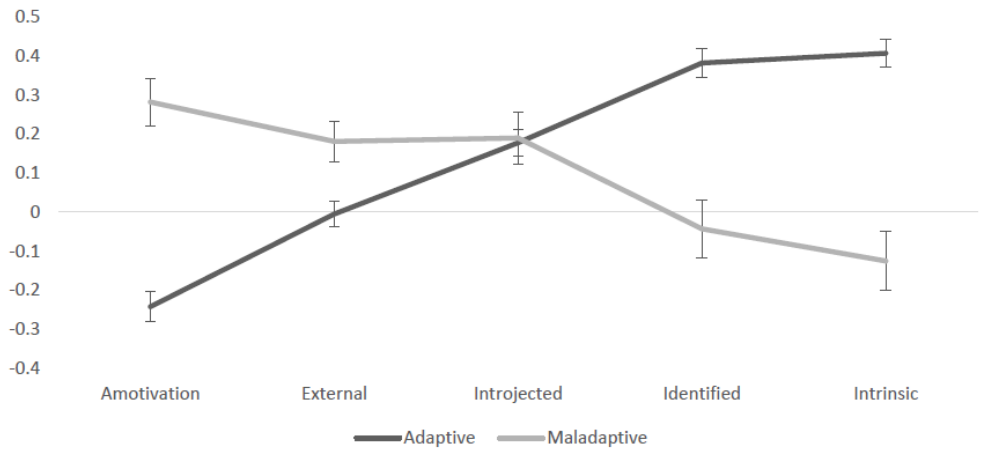
independent studies to derive a robust conclusion) confirmed that as a student moves from the left to the right of the motivation continuum, outcomes become increasingly favourable (see Figure 2)[6]. These effects are consistent in terms of well-being, behaviour and academic performance.

For amotivation, the effects are the most detrimental. These students adopt a rather passive and helpless stance. They are at risk of becoming alienated from school, their peers and even themselves. Research indicates that amotivation is a primary predictor of reduced well-being and is strongly associated with an increased risk of premature school dropout.

In the case of controlled motivation or "mustivation", students rely on shallow learning strategies. Because the student's focus is on the pressure rather than the material, they frequently perform below their true cognitive potential. When externally motivated, students perform only under the watchful eye of an authority figure. Therefore, it is a primary risk factor for drop-out: once the external reward or threat is removed, the effort vanishes. Furthermore, external regulation is consistently linked to decreased psychological well-being. Introjected regulation, by contrast, represents a more complex "mixed blessing". On the surface, these students may appear successful: they often show high levels of persistence. However, this drive is fuelled by internal tension. While it can push a student to work hard, it often results in significant "collateral damage" to their mental health.

Autonomous motivation or "wantivation" is linked to better student outcomes. Students who learn for self-endorsed reasons report a higher well-being. Moreover, they tend to be more resilient: they are more likely to seek help, look for ways to catch up and find solutions when they fall behind. They show more persistence, procrastinate less and prepare more thoroughly for exams. They also process learning material more deeply, which typically translates into better academic performance.

Figure 2
A Graphical Representation of the Average Relations between the Motivation Types and Adaptive and Maladaptive Student Outcomes.



Note: Figure retrieved from “Student motivation and associated outcomes: A meta-analysis from Self-Determination Theory.” 2021, by J. L. Howard, J., Bureau, F., Guay, J. X. Y., Chong, and R. M. Ryan. Perspectives on Psychological Science: A Journal of the Association for Psychological Science, 16(6), 1300–1323. Copyright 2021 by the authors.[6]

Nurturing Students’ Wantivation

To help teachers nurture students’ “wantivation” in their classroom reality, a “Teaching Compass” has been developed (see Figure 3)[7,8]. The compass illustrates that the most motivating way of teaching is by combining autonomy support with structure.
First, an autonomy-supportive approach comprises two distinct yet complementary substyles: a participative style and an attuning style. The participative style entails actively inviting dialogue and soliciting students’ input (e.g., “What do you think?”, “How would you approach this problem?”), thereby signalling that their perspectives meaningfully shape the learning process. Complementing this, an attuning style involves building directly on students’ existing interests. For example, by clearly articulating the personal relevance of required activities. By explaining how a task connects to students’ everyday lives or longer-term goals, they can help students move from mere compliance toward identified regulation. Finally, attuning teachers acknowledge and validate students’ feelings (e.g., “I hear you, this is not the most exciting part of the material”, “I can see why this feels difficult right now”). Such validation conveys understanding and creates the psychological safety students need to engage openly and persist with the challenge.

Second, a structuring style consists of two complementary processes: clarifying and guiding. Clarifying refers to communicating expectations in a clear and concrete way, so students know exactly what is expected of them. This includes making explicit what they need to do, how they should approach the task and what good behaviour or performance looks like. Guidance focuses on helping students succeed, for example, by providing step-by-step support when needed (e.g., breaking the task into smaller parts, modelling strategies, offering hints, or providing extra practice). Guidance also includes motivating feedback that is specific and growth-focused, highlighting what already works and giving concrete direction on what to improve and how. When teachers clarify expectations and provide strong guidance during learning, students are more likely to feel capable and confident in completing the tasks they are given.

Figure 3

The Teaching Compass

Note: Figure retrieved from "Toward an integrative and fine-grained insight in motivating and demotivating teaching styles: The merits of a circumplex approach." 2018, by Aelterman, N., Vansteenkiste, M., Haerens, L., Soenens, B., Fontaine, J. R. J., & Reeve, J. Journal of Educational Psychology, 111(3), 497-521. Copyright 2018 by the authors.[8]

Conclusion

Taken together, SDT offers a practical lens to understand why the same classroom behaviours can come from very different underlying motives, and why this difference matters. When students act out of "mustivation" (external or internal pressure), engagement is often fragile, and learning tends to remain superficial, with potential costs for well-being. When students act out of "wantivation" (personal value, interest, or curiosity), they are more likely to show sustained effort, deeper learning, resilient coping and stronger academic functioning. This also reframes everyday pedagogical practice. Supporting "wantivation" does not mean lowering expectations or turning school into constant entertainment. It means building an environment in which students can internalise the reasons for learning and cooperation.

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Teaching routines – what is the evidence and why does it matter?

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Introduction

Anyone who has spent any time in a classroom knows that behaviour matters. If a classroom is not an orderly environment it becomes impossible for most pupils to learn, and for teachers to teach (Bennett, 2020). Poor behaviour is also a major stressor for teachers, with studies showing it is one of the main reasons some teachers drop out of the profession or experience low well-being (Pei-Hsin et al., 2022; Hastings & Bham, 2003).

However, we can't expect children to know what is expected of them in a school environment. It has become increasingly clear that, just like other parts of the curriculum, behaviour and routines need to be explicitly taught to pupils (Bennett, 2020).

What do we mean by routines? Doug Lemov (2021) has described them as tasks or sequences of behaviour that are explicitly designed and taught by teachers, and that, through practice, become automatic for pupils. An example would be a sequence of behaviours expected of pupils at the start of a lesson, such as sitting at their desks ready to do a starter activity focused on retrieval practice. After sufficient teaching and practice, pupils will know exactly what to do at the start of the lesson and will not need to be asked to do so.

Why do routines matter? Firstly, it creates a sense of calm and purpose in the school, which benefits both learning and pupil well-being. Secondly, not having to expend effort thinking about routines will free up working memory, thus allowing the pupil to concentrate on learning. The same is true of teachers. Pupils knowing and using routines allows the teacher to teach rather than managing misbehaviour. This frees up what the research literature calls 'time on task', increasing the time spent on learning activities in the classroom (Muijs & Reynolds, 2017). Routines can also directly benefit learning. As cognitive psychologist Stanislas Dehaene has pointed out, routines help direct the attention of pupils. In any given situation we are subject to a great range of stimuli from our environment and therefore need to pay heed to those things that are most important (Dehaene, 2021). This will also help us to reduce extraneous factors that can increase cognitive load and is especially hard in an environment in which we are subject to too many other extraneous stimuli, such as noise. This means that even low-level disruption can be very problematic in classrooms.

What is the evidence?

These are the theoretical benefits of teaching routines, but what is the evidence?

In his study of highly effective teachers mentioned above, Lemov (2021) found routines to be one of the key practices teachers use to create calm learning environments.

I reviewed a range of studies on teaching routines, which demonstrate that explicitly teaching behavioural routines to students produces measurable improvements in school behaviour across multiple outcomes. The literature points to a range of interventions that teach classroom management routines (gaining teacher attention, following directions, ignoring peer misbehaviour), school-wide behavioural expectations and self-management skills (Lea, Bray, Kehle, & DioGuardi, 2004; Leflot, vanLier, Onghena & Colpin, 2013; Kamps et al., 2015, 2008; Bradshaw et al., 2012; Smolkowski et al., 2022; Wills et al., 2016). Interventions targeted at the classroom produce positive effects for on-task behaviour and compliance (Mills et al., 2016), while universal school-wide programmes produced meaningful reductions in discipline referrals and improvements in social-emotional functioning (Bradshaw et al., 2012). Both preventative strategies (teaching skills and modifying environments) and remedial strategies (reinforcement and rewards) can be effective.

The interventions looked at taught several categories of behavioural routines, with most programmes combining multiple elements. Classroom management routines formed the core of most interventions, including appropriately, following directions, and ignoring inappropriate peer behaviour. These routines were typically framed positively rather than as prohibitions.

While research from Ofsted (2019) showed that classroom and behaviour can focus on three main areas:

- Foundational behaviours, such as punctuality and not calling out. These are the baseline pupils need to meet to allow effective teaching and learning to happen.
- Positive attitudes to learning, such as making a strong effort, a positive contribution in class, engaging in their learning and completing homework to a high standard.
- Social behaviours, the ways in which pupils interact with each other and with adults, formed the third component.

Routines are most typically developed for foundational behaviours, but create the conditions under which positive and social behaviours happen, and routines have also been successfully introduced for social behaviours, such as pupils and teachers greeting each other.

So how do we do it?

A key question is of course how to teach routines. The Australian Education Research Organisation, AERO (2023, pp1-2), suggests the following steps:

1. Introduce the routine and briefly detail your expectations (why and what).
2. Model and describe the routine to your students by demonstrating the expected behaviours (I do).
3. Provide an opportunity for students to practise the routine with teacher support (we do). Practise the routine until everyone can do it the best they can, acknowledging students who are getting it and supporting those who are not.
4. Students complete the routine independently (you do), removing scaffolding from the teacher, as appropriate, and transferring ownership to students.
5. Reinforce and maintain the routine consistently through acknowledgement, praise and practice.

The key things are to explicitly teach routines, and to maintain consistency in their use. The latter is particularly important in relation to behaviour, where consistency is strongly related to a sense of fairness among pupils. It is usually best to break down routines into small steps, especially for younger children.

Consistency is not the same as rigidity, however. It is important to take account of pupils' individual needs and circumstances. Knowing and understanding the circumstances that may lead to poor behaviour is important and can inform teacher responses. What happens, or has happened, in a child's life can influence their behaviour, even over a relatively long period of time (Powell & Todd, 2004), and it is important that teachers are aware of these factors and deal with the child appropriately, taking trauma into account. There is an obvious need to consider the individual needs of pupils, and to ensure practices do not exclude pupils with Special Educational Needs. In Ofsted's (2019) study Special schools and Pupil Referral Units had definitions that reflected the individual needs, challenges and backgrounds that their pupils face, and often determined behaviour on a case-by-case basis.

This cannot, however, mean that misbehaviour is tolerated, as the impact on both the child's own learning and, importantly, on the learning of others in the class can be substantial.

Importantly, routines and behaviours need as much as possible to be set at the school level. This will provide clarity to pupils and avoid confusion, as well as leading to a greater sense of fairness and equality. It will also ensure that teachers feel supported and can rely on broader structures. As practice makes perfect, applying routines across teachers and lessons will also help pupils become proficient at them.

Conclusion

Routines matter, and need to be taught, along with required behaviour. We should not expect pupils to pick them up implicitly, or to necessarily know how to apply them if not taught. This does mean that, at the start of a school year or phase, a little more time may need to be spent on this teaching. But this investment of teacher and pupil time will pay off handsomely in terms of a calmer class, better learning and happier pupils and teachers.

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