An exploration of systems used by school leaders to monitor student progress and development in post-primary schools in Ireland

Helen McTighe

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Institute of Education,
Dublin City University

Supervisors
Prof. Gerry McNamara
DCU Institute of Education
School of Policy & Practice

Dr. Shivaun O' Brien
DCU Institute of Education
School of Policy & Practice

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Education is entirely my own work, and that I have exercised reasonable care to ensure that the work is original and have confirmed to the regulations on the use and declaration of Generative AI, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work. I hereby certify that no Generative Artificial Intelligence (Gen AI) tools have been used in the creation of the thesis.

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Dedication

'I'm not singing for the future
I'm not dreaming of the past
I'm not talking of the first times
I never think about the last'

This work is dedicated to Catherine 'Cat' Dowling, who sadly passed away on the day of my viva voce examination. Catherine has taught me one of life's most important lessons: to follow your own path and find joy in the journey.

May you rest in peace.

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List if acronyms and abbreviations

Acronym	Meaning
AEN	Additional Educational Needs
AI	Artificial Intelligence
AIED	Artificial Intelligence in Education
AP	Assistant Principal
ARR	Assessment, Recording and Reporting Co-ordinator
AYP	Adequate Yearly Progress
CAT4	Cognitive Abilities Test (Fourth Edition)
CBM	Curriculum-Based Measurement
CTYI	Centre for Talented Youth Ireland
DBDM	Data-Based Decision-Making
DC	DEIS Co-ordinator
DEIS	Delivering Equality of Opportunity in Schools
DIDM	Data-Informed Decision-Making
DMT	Digital Monitoring Tool
DP	Deputy Principal
DWH	Data Warehouse
EAL	English as an Additional Language
EDM	Educational Data Mining
EMIS	Education Management Information System
ESSA	Every Student Succeeds Act
ETB	Education and Training Board
GC	Guidance Counsellor
GDPR	General Data Protection Regulation
HAP	High Academic Potential
HCAI	Human-Centred Artificial Intelligence

HCD	Human-Centred Design
ISLA	International Large-Scale Assessment
JCPA	Junior Cycle Profile of Achievement
LA	Learning Analytics
LCA	Leaving Certificate Applied
LCE	Leaving Certificate Established
MIS	Management Information System
ML	Machine Learning
NAMER	National Assessment of Numeracy and English Reading
NAPD	National Association of Principals and Deputy Principals
NCLB	No Child Left Behind
NGRT	New Group Reading Test
NVivo	Qualitative data analysis software
OECD	Organisation for Economic Co-operation and Development
P	Principal
PASS	Pupil Attitudes to Self and School
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PLUs	Priority Learning Units
PPAD-E	Post-Primary Assessment and Diagnosis (English)
PPOD	Post-Primary Online Database
PPSN	Personal Public Service Number
QUALAS	Quality Assurance with Learning Analytics in Schools
RS	Research Site

SEN	Special Educational Needs
SET	Special Education Teaching
SIP	School Improvement Plan
SNA	Special Needs Assistant
SSE	School Self-Evaluation
T	Teacher
TIMSS	Trends in International Mathematics and Science Study
VEC	Vocational Education Committee
WSE-MLL	Whole School Evaluation – Management, Leadership and Learning

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Helen McTighe, 2026

Abstract

An exploration of systems used by school leaders to monitor student progress and development in post-primary schools in Ireland

Helen McTighe

This research examines the practice of monitoring student progress and development across eight post-primary schools in Ireland.

Navigating an increasingly complex landscape of educational datafication, this research posed two questions to advance knowledge in the field. The first research question sought to explore what systems are in place for monitoring student progress and development in post-primary schools in Ireland. The second research question aimed to identify how schools are using the data collected.

A qualitative multi-site case-study approach was employed, with data generation methods including semi-structured interviews with school leaders, focus group interviews with teacher leaders and documentary analysis involving school policies and Whole School Evaluation inspection reports. Reflexive thematic analysis (Braun and Clarke, 2022) constructed key findings regarding the multifaceted negotiation between standardised and non-standardised metrics and holistic professional judgement in the monitoring of student progress and development. The findings suggest that monitoring is no longer a simple administrative task, but a strategic leadership practice used to guide school improvement, promote equity and strengthen student outcomes. This research confirms that the widespread harnessing of data shapes the ways actors in the education space, such as teachers, students, parents, school leaders, policy makers and school evaluators, form opinions and make decisions.

The considered use of student progress monitoring data is significant from a local and national perspective. It aims to ensure that students are agentic in their progress and are supported by parents and school staff to reach their potential. This research is the first study of its kind in Ireland and provides unique knowledge and insights that will be of interest and of value to those involved in both policy and practice in post-primary schools.

Chapter One: Introduction

1.1. Introduction

This study offers original insights into the monitoring of student progress within the specific context of Irish post-primary (second-level) education. The growing emphasis on data in education has become a significant driver for school improvement, with school leaders and teachers increasingly expected to engage with and apply data-informed practices to enhance student outcomes. Within this context, the study explores and depicts the complex interplay that exists between policy, context and practice in relation to the use of progress monitoring data in the Irish post-primary setting.

This chapter orients the reader by presenting the focus of the study, introducing the research problem and questions, and establishing the significance and background of the research, before concluding with an overview of the thesis structure.

1.2. Focus of this study

This study focuses on understanding how progress monitoring practices are enacted, interpreted, and experienced within Irish post-primary schools, with particular attention to the ways in which school leaders and teachers respond to the growing demands of datafication in education. For the purposes of this study progress monitoring refers to the systematic practices undertaken by schools to track student learning over time, in order to inform instructional decision-making and to provide feedback to students and their parents regarding their progress in school. School leaders and teachers today are navigating an increasingly complex datafication of education, where individual practices and institutional processes are represented in digital data to track, profile, and predict student learning (Pangrazio, Selwyn and Cumbo, 2023b; Shi, 2025). The wider literature defines an Education Management Information System (EMIS) as a mix of operational systems and processes that enable the collection and use of education data for decision-making (Helal, Ahmed and Bhuiyan, 2021; Merriam-Webster,

2024). Shi (2025) extends this definition further by conceptualising school management systems as encompassing all products designed to manage and coordinate teaching and learning in schools.

Datafication itself denotes a complex socio-technical process in which the growing prominence of data shapes values, practices and experiences-transforming teachers into data workers, students into data subjects and the classroom into sites of learning and behavioural data production (Shi, 2025). The integration of learning analytics into educational environments is frequently positioned as having the potential to transform how school leaders and teachers understand and enhance student engagement and performance (Karimov *et al.*, 2025). While policy frameworks emphasise the transformative potential of data for enhancing teaching and learning, the everyday reality of practice reveals a far more complex landscape shaped by school culture, accountability pressures, and contextual constraints.

By exploring progress monitoring across multiple research sites, this study seeks to illuminate the lived processes through which data are generated, communicated and utilised-and sometimes resisted-within schools. This research therefore centres not only on the technical dimensions of progress monitoring systems, but on the relational, cultural and organisational dynamics that influence how these systems function in practice. This study aims to deepen understanding of the interplay between policy intentions, school contexts and classroom-level practices, and to contribute nuanced insights into how data use is enacted within the distinctive landscape of the Irish post-primary sector. It is anticipated that this research will illuminate valuable knowledge that can be used to enhance the design and meaningful implementation of progress monitoring practices that genuinely support learning, teaching and holistic student development.

1.3. The research questions

This research explores the systems used by school leaders to monitor progress and development in eight post-primary schools in Ireland.

Using semi-structured interviews, focus group interviews and documentary analysis, this enquiry aims to provide answers to the following research questions:

1. What systems are in place for monitoring of students' progress and development in schools?
2. How are schools using the data collected?

1.4. The research problem and significance

Despite increasing national and international emphasis on the use of data to inform educational decision-making (Mandinach and Schildkamp, 2021; Rojas-Bravo, Fromm and Carrasco-Ogaz, 2024), relatively little is known about how progress monitoring systems operate within Irish post-primary schools, or how school leaders and teachers make sense of and act upon the information these systems generate (Hislop, 2017; Young *et al.*, 2018). While Irish schools are increasingly expected to demonstrate accountability, track student development, and use evidence systematically to support improved learning outcomes through processes such as school self-evaluation (SSE) and external inspection (OECD, 2024), the landscape remains fragmented (Hislop, 2017). Schools differ widely in the structures they use, the purpose assigned to data, and the capacity of staff to interpret data meaningfully (O'Brien *et al.*, 2019).

A gap in knowledge exists in relation to the systems used by school leaders to monitor student progress and development, how these systems shape the construction of 'student progress', and how school leaders and teachers are using the data being collected within them. Equally, little is known about teachers' lived experiences of the growing demands for data-informed practice in the Irish post-primary context. As a result, there is limited understanding of the enablers and barriers that shape data practices in post-primary schools in Ireland, or how these schools can

best involve students, parents and teachers in progress monitoring processes. This research is significant because it investigates the experience of school leaders and teachers within their school context and captures their perspectives to inform the work of policy makers and practitioners in supporting effective approaches to student progress monitoring in the post-primary sector.

This study acknowledges that data-use practices are not neutral or purely technical acts but are meaning-making activities influenced by context, values, relationships and institutional cultures. Understanding the subjective experiences, sense-making processes, and interpretive practices of school leaders and teachers is therefore essential to understanding how systems that monitor student progress and development operate in real-world contexts. This study adopts this perspective by examining how school leaders and teachers construct, negotiate and give meaning to data, and how these meanings influence the everyday realities of progress monitoring. This research offers valuable and timely insights at a moment when Irish post-primary education is experiencing increased expectations for accountability, inclusion, and school improvement. By exploring how progress monitoring is enacted across diverse school contexts, the study provides a richer understanding of how these processes unfold and are lived out under real-world conditions.

Its significance lies in three key contributions. Firstly, this study illuminates the real-world conditions that shape the effectiveness of progress monitoring, including cultural, organisational and relational factors that influence whether data leads to meaningful pedagogical action. Secondly, it illustrates opportunities for more collaborative and inclusive data practices and identifies processes that can engage teachers, students and parents in ways that build trust, agency and shared responsibility for learning. By attending to lived experience, this reflects a thematic lens concerned with the relational dynamics underpinning data practices (Braun and Clarke, 2021). Finally, the study contributes to national and international discourse

on data use in education by providing context-specific evidence from a system that has historically been under-researched in this domain. The insights generated have practical relevance for school leaders, teachers and policy makers seeking to strengthen progress monitoring practices and enhance student learning through more coherent, human-centred and context-responsive approaches to data.

1.5. The background to the research

The practice of data-informed decision-making (DIDM) and data-based decision-making (DBDM) has been used internationally by policymakers, school leaders and teachers for decades (Knapp *et al.*, 2006; Schildkamp and Kuiper, 2010; Van Geel *et al.*, 2016; Schildkamp, 2019; Mandinach and Schildkamp, 2021; Karimov *et al.*, 2024; Lee, Camburn and Sebastian, 2025). While making decisions has always been part of school leadership and development, the systematic use of data to inform decisions is comparatively new to the Irish education system (Young *et al.*, 2018). DBDM typically refers to an approach in which decisions are derived primarily from systematically collected and analysed data, often privileging quantifiable indicators and formalised procedures (Schildkamp, 2019). In contrast, DIDM positions data as an important element within a broader decision-making process that also includes professional expertise, contextual understanding and ethical judgement (Brazauskienė, 2025). This distinction is particularly salient in complex school settings, where decisions cannot be reduced to measurable outcomes alone and require interpretive sense-making (Isaacs, 2021). Accordingly, this study adopts DIDM as the preferred term, as it more accurately reflects the nuanced, reflective and contextually grounded nature of progress monitoring practices in school.

Over the past decade, the Irish post-primary system has experienced a marked shift towards evidence-informed practice, with schools increasingly expected to demonstrate that teaching, learning and student outcomes are supported by systematic use of data (Mcnamara *et al.*, 2020).

Developments such as the introduction of Junior Cycle and Senior Cycle reforms, the continued emphasis on school self-evaluation, and growing accountability expectations have contributed to a context in which schools generate and interact with greater quantities of data than ever before (Department of Education and Skills, 2015; Department of Education, 2022a, 2022c). The monitoring of student progress and development, once a relatively informal or teacher-led process, has become more structured, more visible, and more closely scrutinised (Department of Education and Skills, 2012; MacPhail, Halbert and O'Neill, 2018). As a result, school leaders and teachers now engage with a wide range of digital platforms, assessments and reporting tools designed to monitor academic progress and broader indicators of student development (Lunde and Ottesen, 2021).

Data analytics has been used in education by different stakeholders for various purposes such as monitoring students' absences, analysing students' learning outcomes, and evaluating teachers' performance (Karimov *et al.*, 2024). International studies investigating the use of data analytics in educational settings often emphasise its benefits for analysing students' learning outcomes, defining at-risk students, and personalising teaching according to the individual needs of students (Karimov *et al.*, 2024). While international developments highlight increasingly sophisticated data analytics, these trends are unevenly reflected in the Irish post-primary context (Lunde and Ottesen, 2021). Equally while recognising the benefits, the increased expectation and availability of data does not necessarily translate into coherent practice. Schools differ considerably in their access to digital systems, their capacity to analyse data, and their confidence in using data to inform teaching and learning (Marcus-Quinn, Hourigan and McCoy, 2019). In addition, the cultural and relational dimensions of data use-such as staff beliefs, parental expectations and student engagement-are rarely examined in detail despite their influence on how progress monitoring unfolds in practice. While national policy encourages schools to adopt reflective, data-informed approaches, it provides limited

guidance on how progress monitoring should be operationalised or how the resulting data should be meaningfully interpreted at classroom, leadership or whole-school levels (Skerritt *et al.*, 2021). School leaders and teachers interpret data through their values, professional identities, experiences and institutional contexts. Understanding these meaning-making processes is therefore essential to understanding progress monitoring as a lived practice rather than a technical procedure.

Viewed through a data-literacy lens, this context reflects a complex and occasionally contradictory environment: schools are expected to be data-informed, but are given significant autonomy in selecting systems and designing processes; leaders are tasked with interpreting data for school improvement, yet face varying levels of staff buy-in and expertise; and stakeholders such as parents and students are increasingly included in data conversations, though often without clear frameworks for their involvement (Mandinach and Schildkamp, 2021). The present study is situated within this evolving context of datafication. By exploring progress monitoring across multiple Irish post-primary schools, this research study aims to illuminate how schools navigate expectations, construct meanings from data, and engage the wider school community in understanding and responding to student progress and development.

The rationale behind the use of progress monitoring data for school improvement also warrants further research. On the one hand, school improvement may mean an integrated curriculum and pedagogy supplemented by systematic, aligned formative assessments which will produce low stakes diagnostic data to improve student understanding of a topic. This will be in direct opposition to the notion of school improvement that answers to an assessment-based accountability system that equates school effectiveness with improved student test results on high-stakes, summative assessments (Conklin Bueschel, 2018). The almost exclusive emphasis on student academic achievement in accountability systems can ignore the full breadth of

student outcomes, attitudes and behaviours that schools develop resulting in potentially narrow summaries of school effectiveness (Prior, Goldstein and Leckie, 2021).

International educational policy has grown to recognise the significance of non-academic attainment, for example, the Every Student Succeeds Act (Alexander, 2015) in the USA, which requires states to report a non-academic performance indicator such as absenteeism. Prior, Goldstein and Leckie (2021) measured student attainment, absences and exclusion in secondary schools in England and noted that these three outcomes capture different aspects to build a broader picture of school effectiveness. They noted that student destinations and student engagement and aspirations are other areas that, although might not be straightforward to measure, would address the narrow focus of current systems of school accountability. Overall, this study foregrounds progress monitoring as a complex, value-laden practice, critically examining how Irish post-primary schools interpret and enact data use in ways that extend beyond narrow accountability metrics to encompass a broader and more holistic understanding of student development and school effectiveness.

1.6. Positionally of the researcher

To enable readers to judge the validity of this study's findings, it is necessary to position the researcher within the research context. The author of this study has worked in the post-primary education sector since 2001. Firstly, as a post-primary teacher until 2011, then as a guidance counsellor from 2016 until 2022 when the researcher became the principal of a post-primary school in the southeast of Ireland. This professional trajectory means that the researcher's identity as a teacher, guidance counsellor and school principal is deeply intertwined with the focus of this study. The researcher's interest in this study emerged from direct professional experience of managing policy-driven expectations around data use, particularly the challenge of translating these into meaningful and contextually responsive practices in school settings. In the role of post-primary principal, the researcher observed considerable variation in how

progress monitoring data is interpreted and enacted, prompting a critical engagement with the complexities of data-informed practice in everyday school life. The researcher is an active member of the National Association of Principals and Deputy Principal (NAPD), a professional association for second-level school leaders in Ireland. This positioning provides an informed, practice-based understanding of the organisational and policy landscape within which the research is located. It also facilitated access to a voluntary research sample recruited through the NAPD. At the same time, such proximity to the field required careful attention to the issues of power, familiarity and potential bias throughout the research process. The research design of this study acknowledges that the researcher is an active meaning-maker, not a neutral observer. Reflexivity has been treated as an ongoing practice-critically examining how professional background, assumptions and values shape the analytic process. Engagement in the professional EdD programme has created a structured space for critical reflection on this dual role, supporting the development of a more theoretically informed analytically rigorous understanding of the research problem. In this way, the doctoral experience has extended beyond professional learning to enable the researcher to interrogate assumptions and to situate personal practice within wider scholarly and policy discourses.

1.7. Organisation and conclusion

This thesis is organised into seven chapters, each contributing to a comprehensive exploration of progress monitoring within the Irish post-primary sector.

Chapter one: Introduction

Chapter one provides an overview of the thesis by introducing the key concepts, the research problem and questions. It sets out the rationale and significance of the study and provides an overview of the thesis structure. In doing so, it establishes the conceptual foundations that underpin the investigation and clarifies the scope and boundaries of the research focus. Chapter

one also positions the study within wider debates on data use in education, highlighting why progress monitoring represents a timely and necessary area for scholarly enquiry.

Chapter two: Context

Chapter two provides an overview of the Irish post-primary education system and the policy, organisational, and structural factors that shape progress-monitoring practices in schools. It outlines the international and national policy developments that have influenced data use in education, including the rise of accountability, digital technologies, and evidence-informed reform. The chapter also examines key contextual domains-assessment policy, school self-evaluation, DEIS planning, and school leadership-which collectively frame how schools generate, interpret, and act on student progress data. Together, these elements establish the broader environment in which the study's research sites operate and highlight the complexity and diversity of data practices across the Irish post-primary sector.

Chapter three: Literature review

Chapter three presents a comprehensive and critical review of relevant literature, drawing together national and international research on data use, progress monitoring systems, and the cultural, organisational, and relational factors that shape data-informed practice in schools. It traces the evolution of progress-monitoring tools-including standardised testing, curriculum-based measurement, digital systems, and learning analytics-and analyses their benefits, limitations, and implications for schools. The chapter also examines the broader process of datafication, highlighting how cultural, organisational, and ethical factors shape teachers' experiences of generating, interpreting, and acting on student data. Together, these strands of literature reveal the complexity of progress-monitoring practices and identify significant gaps in understanding how school leaders and teachers make sense of data in everyday contexts.

Chapter four: Methodology

Chapter four outlines the methodological approach underpinning the study. It describes the qualitative approach taken to address the research questions, the data generation methods chosen, and the data analysis process undertaken. It describes how semi-structured interviews, focus group interviews, and document analysis were used across eight post-primary schools to explore the systems school leaders employ to monitor student progress and development. The research adopts a multi-site case study design, enabling an in-depth, contextualised examination of practice across diverse school settings while allowing for cross-case comparison. This approach is well suited to examining complex social processes within real-life contexts, aligned with the study's pragmatist epistemological stance. It also explains the ethical considerations and the researcher's positionality, reflecting and justifying the pragmatist stance adopted throughout the study.

Chapter five: Research findings

Chapter five presents the findings of the multi-site case study, outlining how eight Irish post-primary schools monitor student progress and development through a combination of academic, holistic, and technological systems. Within-site analyses illustrate significant variation across schools, yet a shared reliance on hybrid digital tools and teacher-led interpretation emerges, alongside persistent challenges related to data reliability, workload, and staff buy-in. The cross-site thematic analysis identifies key patterns, including the central role of targeted, data-informed interventions, the importance of holistic monitoring, and the ways student and parental engagement are shaped by school culture and expectations.

Chapter six: Discussion

Chapter six critically analyses the findings of the study in relation to the literature and the research questions. This chapter demonstrates the study's original contribution by offering new

insights into how progress monitoring systems are enacted and experienced within post-primary schools in Ireland. This chapter synthesises the findings from the eight research sites and situates them within the broader literature to explain how digital systems, organisational routines, and human judgement interact in the monitoring of student progress and development. The chapter highlights the growing dependence of Irish post-primary schools on hybrid, customisable technological systems, while also emphasising persistent challenges related to data reliability, data literacy and cultural resistance. It shows how school leaders use progress-monitoring data for strategic, operational and pedagogical decision-making, while simultaneously underscoring the centrality of holistic monitoring, student self-reflection and proactive parent engagement in supporting student outcomes. Overall, the chapter argues that progress monitoring has evolved from an administrative task to a complex, relational and leadership-mediated practice that both enables and constrains data-informed improvement in Irish schools.

Chapter seven: Conclusion and recommendations

Chapter seven concludes the thesis by summarising the key contributions of the study and discussing their implications for policy, practice and future research within the field. It also offers evidence-informed recommendations aimed at strengthening coherent and context-responsive progress-monitoring practices.

Chapter Two: The Irish post-primary education system in context

2.1. Introduction

This chapter examines the policy, structural and organisational context in which systems for monitoring student progress and development operate within post-primary schools in Ireland. The term post-primary is used in Ireland to indicate the phase of education that comes after primary school and is equivalent to secondary schooling. The Irish post-primary school system comprises 722 schools and three distinct school types, the voluntary secondary schools (fee-paying and non-fee-paying), community and comprehensive schools, and schools under Education and Training Boards (ETBs), previously known as Vocational Education Committees (VECs). This study's sample represents all three sectors and includes schools in communities of disadvantage referred to as DEIS (Delivering Equality of Opportunity in Schools), and those considered non-DEIS schools, co-educational and single-gender schools. School leaders of various experience levels are all represented in this sample.

To situate the study within its wider educational environment, this chapter is organised into a series of sections that outline the key policy, structural, and organisational features shaping data use in Irish post-primary schools. It begins by examining national and international developments in DIDM, before outlining the main sources of student-related data that Irish post-primary schools are required to collect and use, including administrative databases, attendance and engagement records, special educational needs documentation and assessment data. The chapter then considers how school self-evaluation and DEIS planning embed data use within school improvement processes and explores the growing influence of digital platforms and commercial data tools on school practices. Finally, the chapter discusses the leadership context within which these systems operate, highlighting the central role of school leadership in supporting effective systems for monitoring student progress in a digital age. Together, these sections provide the contextual foundation for this research study.

2.2. Data use in post-primary schools in Ireland

The principle of data use in schools is commonly framed as the systematic utilisation of available data to make decisions (Schildkamp *et al.*, 2018). Data is defined as any information that is systematically 'collected and organised to represent some aspect of schools' (Schildkamp *et al.*, 2019, p. 284). The Irish context has been increasingly shaped by wider international developments. The current era of globalised education reform and increased accountability has resulted in school leaders being held more responsible for creating sustainable, collaborative, and evidence-informed learning organisations. It is no longer acceptable to simply use anecdotes, gut feelings, or opinions as a basis for decisions (Schildkamp *et al.*, 2018). An increasing number of jurisdictions are enacting legislation requiring specific forms of evidence to be incorporated into accountability and school improvement decisions (Young *et al.*, 2018). The No Child Left Behind (NCLB) legislation introduced in the USA had a considerable effect on the accountability agenda internationally (Congress, 2001). DIDM has also become a key component of education policy and practice in countries such as England, Canada, Germany, Norway, Belgium, the Netherlands, South Africa, Trinidad and Tobago, Australia and New Zealand (Schildkamp *et al.*, 2019).

Across post-primary education in Ireland, the Department of Education and Youth articulates a consistent expectation that schools use assessment and other data systematically to monitor student achievement and inform improvement. While no single policy document is devoted exclusively to data use, expectations are embedded across SSE circulars, inspection quality frameworks and DEIS policy (Department of Education, 2022a, 2022b, 2024a; Department of Education and Youth, 2025b). While systematic data use remains a relatively recent development in Irish education (Young *et al.*, 2018), expectations around how schools should engage with data have expanded in two distinct directions. Firstly, in this climate of globalised education reform and accountability, school leaders and teachers are held to account for the quality of the learning experience that they provide (Young *et al.*, 2018). Data, such as student achievement results on

standardised assessments, is utilised in a summative way to meet the information needs of external stakeholders such as parents and the Inspectorate (Brown, McNamara and O'Hara, 2016). On the other hand, there is growing recognition that data should not only be harnessed for compliance and accountability but also to stimulate and inform continuous school improvement (McNamara *et al.*, 2021). For the first time, school leaders and teachers are being asked to systematically gather and analyse various types of data and devise and implement subject department plans, school plans and school improvement plans (O'Brien *et al.*, 2019). In this regard, both school leaders and teachers are expected to analyse multiple sources of data and align appropriate instructional strategies with the needs of individual students (McNamara *et al.*, 2021).

While data availability at the wider system level remains limited, schools themselves hold substantial internal information (Young *et al.*, 2018). However, there is still a notable gap in the integration of these data sources, and very little system-level information exists on standardised ability test scores at post-primary level, constraining both schools' analytic capacity and meaningful national comparison (Brown, McNamara and O'Hara, 2016). The school-level data sources including data from the Post-Primary Online Database (PPOD), attendance records, special educational needs data, assessment results, school self-evaluation evidence, and DEIS planning data are described below.

2.2.1. The Post-Primary Online Database

The Post-Primary Online Database is an individualised database of students enrolled in post-primary schools recognised by the Department of Education and Youth. It contains a wide range of personal information such as the student's PPSN, full name, date of birth, gender, nationality, home address and Eircode. It also records information relating to identity and background, including mother tongue, ethnic or cultural background, and the name as it appears on the student's birth certificate, along with an indicator confirming whether the certificate has been

verified. The purpose of PPOD is to enable the Department of Education and Youth to carry out its role of providing education, within available resources, at a standard that matches the needs and abilities of students in recognised post-primary schools. It enables the monitoring of the progress of students through the education system in order to ensure they are receiving appropriate education and supported to reach their full potential (DES, 2021).

2.2.2. Tusla returns data

Schools are obliged to systematically record student attendance and report patterns of concern, including behavioural issues, suspensions, and expulsions, to Tusla: The Child and Family Agency. In addition to this reporting function, schools are further required to develop targeted attendance strategies and set improvement goals, reflecting a broader policy emphasis on monitoring and intervening in student engagement (Tusla, 2016). These requirements position attendance data as a key mechanism through which schools demonstrate compliance with statutory obligations and support students at risk of disengagement.

2.2.3. Special educational needs data

Post-primary schools are expected to consider multiple types of data and documentation when supporting students with special educational needs. In addition to information on resource allocation, psychological assessments and individual student support plans, schools must systematically gather and analyse data across the Continuum of Support. Information should be drawn from multiple sources, including teacher observations, curriculum-based assessments, standardised tests, transition information from primary schools, and consultation with parents and students (Department of Education, 2024b). Schools are also required to maintain a Student Support File, which collates assessment data, records of interventions, professional reports, and ongoing reviews of progress. At more intensive levels of support, data must be comprehensive and holistic, encompassing academic, social, emotional, communication, sensory, and behavioural domains. This multi-layered data is used to identify

needs, set targets, monitor response to intervention, and refine supports over time, ensuring that provision is evidence-informed and aligned with the student's evolving profile (Department of Education, 2024b). During an evaluation of inclusive practices and provision for children with special and additional educational needs, inspectors evaluate assessment data and school documents relevant to students with additional and special educational needs (Department of Education and Youth, 2025a).

2.2.4. Assessment data

The curriculum and assessment landscape in post-primary schools in Ireland has experienced significant and system-wide changes in recent years (MacPhail, Halbert and O'Neill, 2018). Students attending post-primary school in Ireland complete a three-year Junior Cycle programme, followed by an optional Transition Year programme and a two-year Senior Cycle programme. The introduction of the Framework for Junior Cycle 2015, (Department of Education and Skills, 2015), followed by the redevelopment of the Transition Year programme and the ongoing redevelopment of the Senior Cycle programme, has created a context in which the systematic monitoring, documentation and evaluation of student progress has been significantly intensified.

2.2.4.1. Standardised assessment data

In contrast to primary education, where standardised assessments in literacy and numeracy have been mandatory since 2012 (Department of Education & Skills, 2012), there is no coherent, system-wide requirement for standardised testing at post-primary level. Indeed Circular 0084/2024 (Department of Education, 2024a, p. 1) states that 'while regular and formal standardised testing takes place on a national basis within primary schools, standardised testing in post-primary schools is administered at the discretion of each school; some post-primary schools may not administer any standardised tests' (Department of Education, 2024a, p.1). Circular 0084/2024 emphasises that schools must create their own assessment

policies while ensuring that test results are never used in isolation to predict a student's future (Department of Education, 2024a). It highlights:

> Regarding the use and meaning of standardised-assessment data, results of any one standardised test should not be used in isolation, nor used as baseline data for predicting students' future achievements, nor for solely informing decisions regarding the provision of interventions or targets within learning plans for students (Department of Education, 2024a, p. 2).

2.2.4.1.2. Ability, achievement and diagnostic assessments

Circular 0084/2024 clarifies the differences between ability, achievement, and diagnostic tests, stressing that they should only be managed by suitably qualified staff (Department of Education, 2024a). It notes the following distinction: 'Ability tests are designed to establish what a student is capable of knowing, while achievement tests measure what is known and has been learned or achieved to date' (Department of Education, 2024a, p. 2). Post-primary schools generally conduct entrance examinations in the form of standardised ability tests prior to entry for incoming students. Circular 0084/2024 expands the definition of standardised achievement tests, noting that: 'Standardised achievement tests measure what a student knows and can be used to assess, for example, students' knowledge and skills in literacy and numeracy, and to determine progress in these areas (Department of Education, 2024a, p. 2). Furthermore, it outlines how standardised assessments interact with Irish language exemptions, examination accommodations, and strict GDPR data-protection requirements. The Department of Education also published a list of suitable achievement and ability tests 'which may be utilised in line with the advice outlined in the circular' (Department of Education, 2024a, p. 2). Although the publication of an approved list of suitable assessment instruments represents a degree of central guidance, the overarching policy orientation remains cautious and deferential to a school's professional judgement in meeting 'the need of their own school communities' (Department of Education, 2024a, p. 1). The Cognitive Abilities Test (CAT4), New Group Reading Test

(NGRT), the Post-Primary Assessment and Diagnosis-English (PPAD-E) and the Wechsler Individual Achievement Test, Fourth Edition (WIAT-4) are standardised assessments carried out in Irish post-primary schools.

2.2.4.2. Classroom-based and formative assessment data

The most substantial change introduced by the Junior Cycle Framework and Senior Cycle Redevelopment was in assessment, reframing assessment practices to foreground new approaches to learning and to allow a broader range of skills and key competencies to be evaluated (Department of Education and Skills, 2015; Department of Education, 2022c). There is a dual approach to assessment in subjects, comprising ongoing classroom-based assessments at Junior Cycle level and Additional Assessment Components at Senior Cycle level and final, externally assessed, state-certified examinations. The stated aim of this dual approach to assessment is to reduce the focus on one externally assessed examination as a means of assessing students and to increase the prominence given to classroom-based assessment and formative assessment (Department of Education and Skills, 2015; Department of Education, 2022c).

2.2.4.3. Summative school-based assessment data and state examination data

Schools are required to have records of student attainment and assessment data available for external inspections from the Department of Education and Youth (Department of Education and Youth, 2025a). Schools report summative assessment results from end-of-term examinations to parents, generally twice a year, during both Junior Cycle and Senior Cycle programmes. In addition, schools receive summaries of their students' performance in state examinations from the State Examinations Commission which schools use to analyse patterns of attainment and compare outcomes with national trends. These comparative data create implicit benchmarks against which school performance is evaluated, despite the absence of

formal ranking mechanisms. These data also play a central role in School Self-Evaluation (SSE) and School Improvement Planning (SIP), where schools are required to study examination trends over time, identify priority areas for development, and set measurable targets for improvement (DES, 2016). Although Ireland does not publish official league tables, state examination outcomes continue to function de facto informally as indicators of school quality, shaping parental perceptions, influencing school reputation, and contributing to internal accountability pressures (Gleeson, 2024).

2.2.5. School self-evaluation data

Since the late 1990s, school evaluation has become an important educational policy instrument across Europe, either in the form of eternal school evaluation or school self-evaluation (SSE) practices (Figueiredo *et al.*, 2024; O'Brien and O'Hara, 2026). O' Brien *et al*., (2022a, p. 1) describe SSE as 'an internal, collaborative, cyclical, evidence-based review and improvement process that assists schools to identify actions that aim to improve outcomes for learners and overall school performance'. Figueiredo notes that SSE has 'emerged as a means for school management and improvement as well as accountability and regulation' (Figueiredo, 2024, p. 125).The use of self-evaluation in Irish schools dates to the Education Act 1998 Section 22 which situated the chief obligation for the quality of the education provided to students on the school's board of management and acknowledged that the school principal would have a key role in leading good practice and monitoring of students' achievements in the school (Hislop, 2012). While SSE has been a feature of Irish schools since 2003, the process became a formal requirement in 2012 when SSE was re-introduced as a process of internal review and self-evaluation leading to considered action and school improvement. This formalisation signalled a significant intensification of expectations on schools to generate, analyse and document evidence of effectiveness (Brown, Gardezi, *et al.*, 2021). This formal re-introduction of school

self-evaluation heralded a more systematic adoption of DIDM in Irish schools to improve their administrative and academic standards (McNamara *et al.*, 2021).

Though arguably a 'lighter and softer' approach to school evaluation than traditional forms of inspection, compulsory SSE in Ireland has entered its third cycle: the first cycle occurred from 2012-2016; the second from 2016-2020 was extended because of the Covid-19 pandemic; and the third cycle runs from September 2022-June 2026 (McNamara *et al.*, 2022, p. 159). The current cycle calls for a balance between school and system goals and gives schools autonomy to choose 'context-specific school priorities related to teaching, learning, equity and inclusion' while also taking into account national curriculum goals and strategies (Department of Education, 2022b). The SSE cycle requires schools to gather, analyse, and report a wide range of student-level and school-level data to identify priorities, set measurable targets, and evaluate progress. This expectation represents a significant intensification of schools' analytic and reporting responsibilities. This includes quantitative indicators such as standardised assessment results, state examination outcomes, attendance and retention data, and behavioural records, as well as qualitative evidence such as student and parent feedback and teacher surveys and focus groups (Department of Education, 2022b). These data requirements inform SSE reports which provide an overview on how the school is performing in relation to the area of focus. They extend directly into the development of School Improvement Plans (SIPs), where schools must demonstrate how evidence has informed their chosen actions and how impact will be monitored over time.

As part of Whole-School Evaluation-Management, Leadership and Learning (WSE-MLL) inspections (Department of Education and Youth, 2025a), inspectors assess the school's self-evaluation process and review the school's analysis of data and its use to inform planning at subject and whole-school level. Inspectors also consider the extent to which improvement targets are reflected in teachers' practice in classrooms and in students' learning (Department

of Education and Youth, 2025a). In this way, SSE and SIP processes embed data use as a core professional responsibility, reinforcing the centrality of DIDM within contemporary school governance. SSE also operates at subject-department level, with teachers expected to analyse assessment data, review patterns of attainment, and set subject-specific improvement targets as part of ongoing departmental planning. Furthermore, schools are required to publish an annual SSE report and SIP, embedding data use within a broader culture of transparency and accountability (Department of Education and Skills, 2016). However, research highlights persistent challenges, including variable levels of data literacy among teachers, concerns about workload, and the risk that SSE becomes a compliance exercise rather than a meaningful driver of improvement (McNamara *et al.*, 2022). It is noteworthy that failure to meet SSE goals does not result in sanctions but instead shifts attention to accountability and scrutiny rather than improvement (McNamara *et al.*, 2022).

2.2.6. Delivering Equality of Opportunity in Schools (DEIS) data

DEIS, an acronym for *Delivering Equality of Opportunity in Schools* and the Irish word for 'opportunity', represents the government's core policy for addressing concentrated educational disadvantage. According to the Central Statistics Office (2024), there are 232 post-primary schools participating in the DEIS programme in Ireland. The DEIS Strategy to 2035 seeks to empower children and young people by expanding their educational opportunities and supporting their success (Department of Education and Youth, 2025b). Schools designated under the DEIS programme receive a targeted range of supports to address the specific challenges associated with disadvantage (Department of Education and Youth, 2025b). Within the DEIS framework, the use of data is integral to addressing educational disadvantages and promoting equity. DEIS planning places a strong emphasis on tracking student outcomes particularly in literacy and numeracy, attendance, retention, and progression in order to evaluate the impact of targeted interventions (Fleming and Harford, 2021). Schools are required

to draw on a wide range of quantitative and qualitative indicators, including standardised assessment scores measuring progress in literacy and numeracy, state examination results, attendance and punctuality records, behavioural data, and student and parent voice, to establish baselines, set targets, and monitor progress over time (Department of Education and Youth, 2025b). Specifically in DEIS schools, inspectors evaluate how schools devise, implement, and monitor action plans for improvement across themes including examination attainment (Department of Education and Youth, 2025a).

At an international level, OECD research underscores the importance of comparative data in enabling systems and schools to evaluate performance, identify gaps and develop targeted improvement strategies (OECD, 2022). The DEIS Strategy Implementation Plan 2026-2028 includes the following action to improve the educational outcomes in literacy, numeracy and digital literacy for children and young people at risk of educational disadvantage: 'Participate in large-scale national and international assessments, using the data to track progress, identify emerging challenges, and inform targeted interventions' (Department of Education and Youth, 2025b p. 30). Standardised achievement assessments such as the National Assessment of Numeracy and English Reading (NAMER), the Programme for International Student Assessment (PISA) and the Progress in International Reading Literacy Study (PIRLS) are mentioned in the DEIS Strategy to 2035 as assessments used to monitor achievement in literacy and numeracy in DEIS schools (Department of Education and Youth, 2025b). This cyclical process of data collection, analysis and review embeds DIDM as a central mechanism of DEIS planning, requiring schools to demonstrate evidence of impact and to adjust interventions where progress is not evident. During a DEIS inspection, relevant sections of the school improvement plan (DEIS action plan for improvement) and school data relative to each aspect are examined.

Data-informed approaches are frequently positioned as enabling school leaders and teachers to identify patterns of underachievement, allocate resources strategically, and evaluate the effectiveness of supports in narrowing achievement gaps. In this way, DIDM aligns closely with the evaluative and improvement-focused orientation underpinning both SSE and DEIS, reinforcing its role as a key mechanism for governing school improvement through evidence-based accountability frameworks. However, research also highlights challenges, including variability in data literacy among staff, the administrative burden associated with continuous monitoring, and the risk that schools focus disproportionately on measurable outcomes at the expense of broader developmental goals (Young *et al.*, 2018).

2.3. Technology and data use in Irish education policy

Irish educational policy has adopted a consistently technology-positive stance for almost three decades beginning with Schools IT2000: A Policy Framework for the New Millennium (DES, 1997; McGarr, 2026). Schools IT2000 placed particular emphasis on the provision of technology infrastructure, training for teachers, pilot projects and support services (DES, 1997). While later ICT and digital strategies increasingly referenced assessment, these references remained largely pedagogical in nature, focusing on classroom practice and learner engagement rather than on the systematic use of digital systems for academic monitoring or data analytics (DES, 2009, 2015, 2017, 2022). Across major policy texts from Schools IT2000 to the current Digital Strategy for Schools to 2027, there is no explicit requirement or guidance for schools to establish information systems for the collection, analysis, or longitudinal tracking of student attainment or progress data (DES, 1997, 2009, 2015, 2017, 2022). Where data receives more sustained attention in recent policy, it is framed predominantly in relation to data protection, ethical use, and compliance with GDPR, rather than as an instructional or evaluative resource for school-level academic decision-making (DES, 2022).

Similarly, departmental circulars concerning assessment regulate the administration, interpretation, retention and protection of assessment information, but do not mandate or recommend the use of digital management information systems to support systematic progress monitoring at school level (Department of Education, 2024a). This policy silence is significant, as it suggests that despite what McGarr and Johnson (2021) argue is a longstanding association between digital technology and modernisation within Irish education, the role of technology in supporting structured data use regarding student progress and development has remained implicit or delegated to local school discretion rather than explicitly articulated within national policy frameworks.

2.4. The rise of digital platforms and commercial data tools

The widespread adoption of commercially provided digital school-management platforms such as Compass, VSware and Tyro has significantly reshaped the way schools collect, store and analyse data. These systems centralise attendance, behaviour, assessment and student support information, increasing the accessibility and immediacy of data for teachers and school leaders. They also generate new forms of data, such as real-time dashboards, longitudinal attainment tracking, and behavioural analytics, which increasingly shape how student progress, engagement and behaviour is interpreted and acted upon.

2.4.1. Compass

Compass is a cloud-based School Management Information System (MIS) developed by Compass Education, first established in 2009 and now used by thousands of schools across Australia, the United Kingdom, and Ireland. Compass describes itself as 'an all-in-one solution for schools' where they become a 'strategic partner to improve school administration, drive parental engagement and foster school wellbeing' (*Compass Education - School Management System*, 2026). Such framing positions the company not merely as a service provider but as a

dynamic actor in shaping school priorities and practices, raising questions about the growing influence of private technology vendors in educational decision-making.

2.4.2. VSware

VSware is an Irish educational technology company established in 2013 that provides a cloud-based management system of the same name for Irish schools. This system includes tools for attendance tracking, assessment and assessment analysis, behaviour management, and timetable scheduling (Martinez Lunde, 2025). VSware has established a strong presence in both Ireland and Norway, with a focus on 'transforming' the school management information system market (O' Hare, 2024). This market expansion underscores the growing normalisation of commercially driven digital infrastructures as the backbone of school data practices.

2.4.3. Tyro

Tyro is an Irish education technology company established in 2023 which provides a cloud-based school management and student platform. Similarly to VSware, it integrates core administrative processes such as attendance tracking, student records, behaviour and pastoral data, assessment information, and school-home communication within a single digital platform (O' Hare, 2024). Tyro co-founder, Patrick Barry, who also co-founded VSware, describes this platform as a 'data-driven and student-centric experience' rather than a mere school administration system (O' Hare, 2024). While this language foregrounds personalisation and student focus, it also exemplifies how commercial platforms reframe data intensification as inherently supportive and progressive, potentially obscuring issues related to surveillance and the narrowing of how students are represented through data.

2.4.4. Athena Analytics

Athena Analytics is an Irish EdTech company that provides a range of progress monitoring options to post-primary schools in Ireland. Athena provides a suite of school-based digital tools designed to support evidence-informed decision-making. The Athena Tracker uses

machine-learning techniques to estimate students' baseline potential in individual subjects, drawing on patterns in their prior attainment and profiles, in order to identify students who are underperforming. Athena Tracker uses results from standardised assessments e.g. Cognitive Abilities Tests (CAT4), summative tests at Christmas and summer and state examination assessments. Athena FitnessMark provides an approach to monitoring student fitness, while Athena Reports offers schools detailed analyses of Junior and Leaving Certificate outcomes to inform strategic planning and evaluation (*Athena Analytics*, 2026). Students can access their profile on the Athena Tracker platform for an additional cost to the school.

2.4.5. Cognitive Abilities Test Fourth Edition (CAT4)

The CAT4 is a suite of tests, originally paper based and now mostly done online, developed by GL Assessment to support schools in understanding 'students' abilities and likely academic potential' (GL Assessment, 2021). According to the Teacher Guidelines, results from CAT4 testing can be used to 'inform individual and group teaching, for target setting and monitoring the performance of groups of students' (GL Assessment, 2021). CAT4 testing comprises standardised assessment of verbal, non-verbal, quantitative and spatial reasoning. It notes that tests of 'verbal reasoning have always been among the best predictors of educational progress' (GL Assessment, 2021) and later notes that quantitative and verbal abilities 'have long been known to be predictive of educational and occupational outcomes' (GL Assessment, 2021). The Teacher's Guidelines also note that nonverbal and spatial reasoning 'have been found to be significant predictors of educational attainment, despite their content being generally unrelated to formal schooling' (GL Assessment, 2021). Individual student reports include a comment on indicator grades such as the following example:

> 'From the CAT4 data, Daniel is predicted to achieve A* at GCSE level in subjects such as Design and Technology, Science and Geography. The more literacy-based subjects such as English, RE and History predict B at GCSE level. Knowing where his strengths lie would inform his teachers about his learning preferences and ensure that strategies

used throughout KS3 and KS4 are adapted to suit his needs. With these in place Daniel has every opportunity of achieving A* in every subject' (GL Assessment, 2021).

2.4.6. Pupil Attitudes to Self and School (PASS)

Pupil Attitudes to Self and School (PASS) is a digital survey also developed by GL Assessment that identifies non-academic barriers that may affect learning and engagement in the wider school community, including motivation and confidence (GL Assessment, 2025). According to GL Assessment (GL Assessment, 2025) the PASS survey, especially when combined with the CAT4, helps to identify sometimes hidden challenges that might have otherwise been overlooked. It is recommended that this 20-minute PASS online survey is taken twice a year, firstly to identify issues and then to measure the impact of interventions. Students respond to a series of statements about school and learning. These correspond to nine factors that, according to GL Assessment (GL Assessment, 2025), are proven to be linked to educational goals: feelings about school, perceived learning capability, self-regard, attitudes to teachers, general work ethic, attitudes to attendance, preparedness for learning, response to curriculum demands, and confidence in learning.

2.4.7. SchoolWise

SchoolWise is an Irish education platform designed to support whole-school management, communication and student administration processes. SchoolWise claims that it can provide solutions for learner support and AEN, academic tracking, assessment and analysis and curriculum planning (*SchoolWise*, 2026).

2.5. The post-primary leadership context

Contemporary Irish education policy discourse on school leadership evidences a clear shift towards the adoption of a distributed leadership paradigm in Irish post-primary schools (O'Rourke and O'Brien, 2026). This is demonstrated clearly in the Looking at our School (LAOS) quality framework (Department of Education, 2022a). It supplies a set of standards for two key areas of the work of schools: teaching and learning, and leadership and

management. The leadership and management dimension details four domains to evaluate leadership practice in post-primary schools: Leading learning and teaching, managing the organisation, leading school development and developing leadership capacity (Department of Education, 2022a). Domain 1: Leading learning and teaching describe the following statement of highly effective practice: 'The principal, the deputy principal(s) and other leaders in the school have highly effective systems for monitoring students' progress and development. They ensure that these systems are used to help students reach their full potential' (Department of Education, 2022a, p. 35).

Looking at our School (Department of Education, 2022a) notes that 'school leaders' typically refers to formal leadership roles including 'school patrons/trustees, boards of management, principals and deputy principals. It also includes teachers with posts of responsibility and those who have undertaken roles related to the school's priorities' (Department of Education, 2022a, p. 10). Teachers with middle leadership posts of responsibility are known as assistant principals. These roles carry additional remuneration, and in the case of AP1 post holders in ETB schools, they also include an allocation of additional time to support leadership duties. The number of assistant principal posts in a school is determined by reference to the final approved teacher allocation for the previous school year. This ensures that leadership structures are aligned with the size and staffing levels of the school. Furthermore, the Department of Education (2022a) also explicitly emphasises that leadership is not confined solely to those in formal leadership. Rather, it explicitly highlights the leadership role for all teachers within the school.

The reliance on digital systems for monitoring student progress and supporting data-informed decision-making (DIDM) requires a more nuanced form of distributed leadership, one that incorporates principles of digital leadership, data literacy, and shared responsibility for data governance (Schildkamp *et al.*, 2019)**.** Kilcoyne (2024) argues for an integrative approach to

leadership practices where a convergence of transformational, instructional and distributed leadership paradigms offer a comprehensive theoretical framework necessary for navigating the complexities of school leadership in a digital age. This perspective is particularly compelling, as it reflects the multifaceted leadership demands emerging in data-rich school environments. While structural models of distributed leadership are well established in Ireland, Kilcoyne's (2024) work highlights the need for deeper cultural and relational enactment, a position adopted in this research.

Within the Irish context this need is further intensified by an increasingly complex and fragmented policy landscape regarding data use in schools. Although there is no overarching national data policy for post-primary schools, a wide range of Department of Education frameworks, circulars and statutory requirements collectively construct a strong expectation that school leaders establish and maintain robust data systems and practices. School leaders are required to utilise Management Information Systems (MIS) to fulfil statutory obligations regarding enrolment such as October Returns and ongoing data submissions through P-POD. Additional data requirements arise from Junior Cycle reforms, including Classroom-Based Assessments (CBAs), the Junior Cycle Profile of Achievement (JCPA) and the record of Priority Learning Units (PLUs). Requirements linked to DEIS planning, SEN provision, Tusla submissions and SSE processes further necessitate the systemic collection, analysis and use of student data. Moreover, the Digital Strategy for Schools to 2027 (DES, 2022), together with GDPR obligations, places explicit responsibility on school leaders for data governance, including data protection, ethical use and security. Taken together, these policy instruments create a context in which data use is mandatory and multifaceted, yet guidance for school leaders remains largely compliance-driven and dispersed across documents (Department of Education, 2022a; DES, 2022).

2.6. Conclusion

Taken together, the policy, structural, and organisational features outlined in this chapter illustrate the complex environment in which Irish post-primary schools collect, interpret, and act on student data. These contextual factors shape not only the types of data available to school leaders and teachers, but also the expectations, pressures, and opportunities that influence how such data is used in practice. To understand how these dynamics intersect with broader theoretical debates, the next chapter turns to the international literature on monitoring systems, datafication and standardised assessment. This review examines the conceptual frameworks, empirical findings, and critical perspectives that inform contemporary understandings of progress monitoring and data-informed decision-making, providing the analytical lens through which the findings described in later chapters can be interpreted.

Chapter Three: Literature Review

3.1. Introduction

Education is ever-evolving and continuously adapting to the demands and requirements of an increasingly globalised world (Darmuki, A *et al.*, 2023). Education systems around the world are increasingly expected to equip students with the necessary knowledge and skills to achieve their full potential within complex social, economic and technological contexts (Suna *et al.*, 2020). Within this evolving educational landscape, a growing emphasis has been placed on the monitoring of individual student progress, driven by multiple and interrelated factors. Expectations regarding the capability of Education Management Information Systems (EMIS) have developed significantly over the past decade, reflecting broader progress in technology and responding to the increased monitoring expectations of government and development partners, particularly the need to monitor performance and achievement (UNICEF, 2021). The monitoring of individual student progress is also underpinned by an increased emphasis on ensuring that all children can benefit from opportunities to learn. Critiques of performativity and managerialism argue that evaluation technologies risk marginalising the ethical and relational aspects of education (Ball, 2003; Biesta, 2009; O'Brien and O'Hara, 2026) . However, at both international and national levels, policy commitments have increasingly prioritised equity and inclusion, emphasising processes that address the needs of marginalised and disadvantaged groups in education policy and planning (Ainscow, 2020; UNICEF, 2021).

This chapter presents a critical review of the literature relevant to the monitoring of students' academic progress and holistic development within contemporary education systems. The purpose of this literature review is to situate the study within existing theoretical and empirical research and to critically examine the key concepts, systems, and practices that underpin the monitoring of student progress and development. The chapter begins by establishing conceptual clarity through the definition of key terms, including EMIS, monitoring, progress,

achievement, holistic development, assessment and digital monitoring tools. It then explores the factors that have influenced the growing emphasis on data use in education, including policy developments, technological innovation, and increased demands for accountability and evidence-informed practice.

In order to address the first research question, *what systems are in place for monitoring students' progress and development in schools,* the review considers monitoring practices across multiple levels, including international, national and school-based systems. This includes an analysis of international large-scale assessments and national monitoring systems, as well as technological systems such as EMIS and digital monitoring tools that support the collection and analysis of student data. The second research question, *how schools are using the data collected*, is addressed through an exploration of literature relating to data-informed decision-making, the role of school leaders in data use, and the application of learning analytics (LA) and educational data mining. This section of the review examines how data is interpreted and used to inform instructional practices, school improvement strategies and organisational decision-making, while also highlighting the challenges and limitations associated with data use in practice. It also examines the literature on stakeholder engagement, including teacher collaboration, principal leadership practices, student participation in monitoring, and the role of digital systems in facilitating communication with parents. The review also considers emerging perspectives on participatory approaches to data use, as well as the barriers that can prevent effective engagement with data within school communities. By critically examining both the opportunities and challenges associated with data-driven monitoring systems, this chapter establishes a framework through which the findings of this study can be analysed and interpreted. Overall, the selected body of literature provides a comprehensive and critical foundation for addressing the research questions underpinning this study.

3.2. Literature review strategy

A comprehensive search strategy was employed to identify studies relevant to systems used to monitor student progress and development. Due to the rapid evolution of digital technologies and data use in education, priority was given to peer-reviewed literature published between 2015 and 2025, although seminal works published prior to this period were included where they were considered foundational to the field. Initial scoping searches were conducted across a range of electronic databases, including ERIC, EBSCO and the DCU library catalogue. In addition, non-indexed sources such as Dissertation Abstracts and Digital Dissertations were consulted, alongside Google Scholar, to ensure a thorough examination of the topic. Keywords used in the search included 'student data', 'student progress', 'student development', 'data-driven decision-making', 'data-informed decision-making', 'academic achievement', 'monitoring', 'tracking', 'datafication', 'learning analytics' and 'educational data mining'. Sources were included if they focused on educational settings and addressed the monitoring of student progress, academic achievement, holistic development, data-informed decision-making, learning analytics, educational data mining, or related educational technologies. Additional relevant sources were identified through the screening of reference lists. Studies were excluded where they focused exclusively on higher education contexts without clear relevance to school settings, lacked a clear empirical or theoretical basis, or were unavailable in English.

The review process involved an initial screening of titles and abstracts to determine relevance, followed by a full-text analysis of selected publications. During this process, studies were evaluated for their relevance to the research questions, methodological rigour, and contribution to the current understanding of monitoring systems and data use in schools. A thematic synthesis approach was utilised to analyse the literature. Following repeated readings of the selected studies, key concepts, findings, and areas of debate were identified and coded by the

researcher. These codes were then grouped into broader themes relating to monitoring systems, data-informed decision-making, technological developments, stakeholder engagement, and factors influencing effective data use. Through comparison and integration of findings across studies, the researcher identified patterns, tensions and gaps within the literature. In doing so, this review established a conceptual and analytical framework that informed the subsequent investigation into the use of monitoring systems in schools and supported a deeper understanding of how such systems may be more effectively utilised to enhance student progress and holistic development.

3.3. Definition of key terms

An important part of any study is defining the key terms that relate to the research, in this case: systems, monitoring, tracking, progress, academic achievement, development and assessment.

3.3.1. Education Management Information Systems

The Merriam-Webster dictionary defines system as ‘an organised or established procedure’ (Merriam-Webster, 2024). Specifically regarding schooling, the term education management information system (EMIS) refers to a system for managing educational data (Helal, Ahmed and Bhuiyan, 2021). This term is interchangeable with management information system (MIS) and comprises an education database that aims at ensuring timely, accurate and appropriate education data and information are available for decision-making (Nwakesiri, 2022). In different contexts, such a system may be referred to by a different name (UNICEF, 2021). For example, such a system may also be referred to as an educational data warehouse (DWH). A data warehouse (DWH) is a web-based, centralised location where principals can access data reports on teachers and students (Drake, 2021). EMIS can measure administrative and student data but also financial, human resources and learning data (Nwakesiri, 2022). It can also include pedagogical materials, institution details, student enrolment, attendance, drop-out rates, ethnicity, gender, grade level, perceptions of staff, finance, infrastructure and facilities

(Nwakesiri, 2022). An EMIS can manage a wide range of information including student information (demographics, discipline and other functional elements); learning data (assessment and achievement data, teacher evaluations, curriculum effectiveness data and other factors related to progression through school); longitudinal data; and business intelligence (financial and human resources data, strategic metrics etc.) (UNICEF, 2021). An EMIS offers systematic, high-quality data in a well-structured enabling environment that makes it easier to use the data in planning and policy discussions (Helal, Ahmed and Bhuiyan, 2021). For this student, EMIS has been defined as a mix of operational systems and processes, increasingly supported by digital technology, that enables the collection, aggregation, analysis and use of data and information in education, including for management and administration, planning, policy formulation, and monitoring and evaluation (UNICEF, 2021; Nwakesiri, 2022). It is a platform which enables educational institutions to manage their data or information in a single place (Nwakesiri, 2022). This system can act as a data repository where institutions can gather, store, and analyse data and create various reports which assist to monitor the institution's growth and the students' academic growth in real-time (Nwakesiri, 2022).

3.3.2. Monitoring

The Merriam Webster dictionary defines the transitive verb to monitor as follows: 'to watch, keep track of, or check usually for a special purpose' (Merriam-Webster, 2024). For the purposes of this study monitoring is defined as activities pursued by schools, at a classroom or whole-school level, to keep track of student learning for purposes of making instructional decisions and providing feedback to students and parents on their progress. In educational literature and practice, monitoring can also be known as tracking.

3.3.3. Progress

Progress implies change over time regarding educational outcomes and engagement. Progress in an area of learning usually takes the form of increasing proficiency reflected in more

extensive knowledge, deeper understandings and higher-level skills. Establishing where students are in their learning at any given time means clarifying what they know, understand and can do at that point in their progress (Savage and Bentley, 2017). When students understand what high levels of proficiency and better-quality work look like in an area of learning, they have a basis for reflecting on their current levels of achievement and for setting realistic, challenging goals for further learning. In this way, students are supported to take a degree of responsibility for their own learning and long-term progress (Savage and Bentley, 2017).

3.3.4. Achievement

Schools are centrally concerned with promoting high levels of academic achievement (Vandana and Sarif, 2022). Teachers are increasingly positioned as accountable agents for students' academic outcomes (Resch, 2024). The literature notes that academic achievement is paramount, and it is treated as the validation of an individual student's learning outcome (Vandana and Sarif, 2022). Students are distinguished from one another based on their scholastic and non-scholastic performance outcomes (Vandana and Sarif, 2022). Academic achievement is considered a comprehensive and potential indicator of their future career (Vandana and Sarif, 2022). The concept of academic success has generally been associated with the attainment of summative assessments, as stipulated by learning outcomes (Cachia, Lynam and Stock, 2018). In education, there is a growing emphasis on the use of data to base decisions on, assuming that this will lead to increased student achievement (Van Geel *et al.*, 2016). In a review of ninety-four studies to analyse the measurement methods for assessing students' academic achievement, it was found that most studies conducted in Western countries used standardised tools and terminal assessments like the Junior Cycle and Leaving Certificate examinations to assess students' academic achievement, while in developing countries, it was

observed that students' results obtained in class tests were considered a measure of their academic achievement (Vandana and Sarif, 2022).

3.3.5. Holistic development

Development is understood as holistic development which includes the social, moral and personal development of the student and the development of prescribed key skills and competencies underpinning the curriculum (O'Flaherty and McCormack, 2019; Department of Education, 2022a; National Council for Curriculum and Assessment, 2024). While academic achievement was once thought to be the most important outcome of formal educational experiences, and while there is little doubt as to the vital role such achievements play in students' lives and later, researchers and policy makers are ever increasingly turning to social and emotional factors, as well as the relationships among them, as indicators of student well-being and psychological development (Moore, 2019). One of the most important aspects of education, especially in the 21st century, is fostering of students' ability to think critically and creatively, solve complex problems and collaborate effectively (Suherman, Vidákovich, and Komarudin, 2021). Indicative of this movement is the recent addition of social and emotional measures to established Organization for Economic Co-operation and Development (OECD) assessments (İdil, Gülen and Dönmez, 2024). These measures include emotional regulation (e.g. stress resistance, optimism), task performance (e.g. motivation, persistence, self-control) and compound skills (e.g. metacognition, self-efficacy) (Moore, 2019).

3.3.6. Assessment

Educational assessment plays a vital role in the quality of student learning experiences, teacher instructional activities, and evaluation of curriculum, school quality and system performance (Brown, 2022). Assessment is also central to measuring both students' academic achievement and their progress over time, providing evidence of what students have learned and how their learning is developing. The use of assessment to monitor learning can be contrasted with the

more traditional uses of assessment to judge and grade students on how well they have learnt what they have been taught (Savage and Bentley, 2017). In this way, assessment supports monitoring practices by supplying ongoing data that enables teachers to track changes in student understanding, skills, and engagement, thereby linking directly to the concept of progress. Hence, assessments act as a lever for both formative improvement of teaching and learning and summative accountability of teachers, schools and administrations (Brown, 2022). Formative assessment, in particular, supports the continuous monitoring of student progress, while summative assessment provides a measure of academic achievement at a specific point in time.

3.3.7. Digital monitoring tools (DMT)

The term digital monitoring tool (DMT) refers to digital tools used for obtaining, storing, organising, processing, and analysing student assessment data that support teachers during instructional planning, providing them with feedback based on student assessment results (Faber, Feskens and Visscher, 2023). Digital systems generally provide graphics that visualise student progress, offer benchmarks to compare student achievement with (national) standards, and provide tools for aggregating (e.g., transforming student-level date into class-level data) or disaggregating (e.g., transforming class-level into student-level data) the data (Faber, Feskens and Visscher, 2023). Such systems can help teachers assess and monitor how students' learning is progressing, enabling ongoing formative, as well as summative, evaluation. Indeed, the employment of such tools can assist teachers in the process of making grounded instructional decisions based on student progress data (Staman, Timmermans and Visscher, 2017).

3.3.8. Monitoring of students' progress and holistic development for this study

Students' progress and achievement is monitored using international systems, national systems and individual school systems depending on the jurisdiction. While monitoring of students' progress and development data can be understood as solely involving the data from

standardised testing and other summative assessments, the concept of progress monitoring data for the purpose of this study includes results from formative assessment, such as topic assessments and summative assessments such as standardised testing, term assessments, classroom-based assessments, mock examinations and state examinations, as these are the routine tests used to assess students in post-primary schools in Ireland.

Masters (2017) proposes an alternative view of assessment where it is understood as a process not solely for the purpose of judging how well students have learned what they have been taught, but for the purpose of monitoring that learning. The monitoring of learning requires assessment processes designed to establish and understand where students are in their learning at the time of assessment, either as individual learners or student groups (Savage and Bentley, 2017). When group performances are the focus of the monitoring process, the emphasis usually is on distributions of student achievement and distributional statistics such as the mean. These can be estimated from scientifically drawn samples. There also tends to be less interest in fine diagnostic details and more interest in overall levels of achievement (Savage and Bentley, 2017). Monitoring the progress and development of students' learning allows teachers to establish and understand where learners are in their long-term learning progress at the time of the assessment; to evaluate growth over time; and to provide teachers, students, parents, school leaders, system managers and governments with quality information to promote further learning (Savage and Bentley, 2017).

3.4. Data use in education: Factors that have influenced the move towards monitoring of student progress and development

Data use in education has become significant, in part, because policymakers have emphasised the necessity for education to become an evidence-based field, causing education systems to rely more on data and research evidence, and not just experience and intuition. It has been influenced by a number of factors including new forms of accountability with higher stakes

and the rapid increase in affordable digital technologies and data storage, and an administrative ethos emphasising the strategic management of educator talent (Drake, 2024). For example, in the United States, the American Recovery and Reinvestment Act, the Statewide Longitudinal Data Systems Grant Program, and the Common Education Data Standards have promoted and financed data use initiatives. Furthermore, the U.S. Department of Education has invested more than $610 million to build up technological infrastructure for data collection, storage, and analysis, with additional support from a large collection of private actors (Drake, 2021).

Educational data can be defined as 'information that is systematically collected and organized to represent some aspect of schooling' (Schildkamp *et al.*, 2017, p. 242). The literature indicates that effective data use requires the use of multiple sources of qualitative as well as quantitative data, and not only achievement data (Mandinach and Schildkamp, 2021). It is important to consider diverse sources in the decision-making process because all too often, education systems think only of student performance indices (i.e. assessment results) as educational data. Schools have access to multiple data sources: input, process, context and output data (Schildkamp, Karbautzki and Vanhoof, 2014). Input data includes data such as demographics of students. Process data refers to information on the quality of learning and teaching. Context data refers to information on policy and resources. Output data includes data such as student achievement data (Schildkamp, Karbautzki and Vanhoof, 2014).

Data use is a complex and interpretive process, in which goals must be set, data must be identified, collected, analysed, and interpreted, and used to improve teaching and learning. This interpretive transformation process necessitates a comprehensive skillset as part of an iterative enquiry process that informs decision-making (Mandinach and Schildkamp, 2021). While data can be employed to inform decisions at every level in the education system, the literature demonstrates the value of using assessment data to enhance teacher instruction and, ultimately, improve student achievement (Pitsia, Karakolidis and Lehane, 2021). DIDM is receiving

increased attention globally and its growing importance signals an empirical shift from input to output orientation in education that has taken place in many countries (Hawlitschek *et al.*, 2024). This can be attributed to the fact that the literature has identified studies where effective data use by teachers and school leaders can lead to school improvement in terms of increased student achievement (Schildkamp, Karbautzki and Vanhoof, 2014; Spiele *et al.*, 2025). Yet the literature also notes mixed and inconsistent evidence demonstrating that data use is associated with improved student outcomes (Abrams, Varier and Mehdi, 2021). This disconnect between data use practice and improved student learning outcomes has been attributed, in part, to limited teacher preparation and professional development in understanding, interpreting, and applying data-informed information to decisions about instruction (Mandinach and Gummer, 2016).

3.5. Tools for monitoring student progress

Progress monitoring tools include curriculum-based measurement (CBM), computer-adaptive assessment (CAT), and mastery measurement (MM) (Yaziz and Noordin, 2018). CBM relies on classical test theory for its scoring approach, while CAT employs algorithms and item response theory to determine a student's ability based on their performance on previous questions, adjusting the difficulty of subsequent items accordingly. Both methods generate final scores by analysing the completed assessment items. MM assesses student performance by presenting progressively more challenging items over a set period. However, it does not address broader generalised skills, making it less suitable for high stakes testing. In contrast to these methods, classroom assessments enable teachers to design more tailored and nuanced evaluations of student abilities. However, creating and administering such assessments is time-intensive (Yaziz and Noordin, 2018).

3.5.1. Curriculum based measurement

Within the context of progress monitoring, the concept that has reached especially high visibility is curriculum-based measurement (CBM) (Deno, 1985; Souvignier *et al.*, 2021).

Developed since the 1980s, CBM is the approach of progress monitoring where students' achievements are measured with short parallel forms of tests that provide feedback for teachers on the effectiveness of the current instruction. The sets of items administered over time should be parallel in difficulty so that differences in performance can be attributed to differences in the students' understanding as opposed to variability in item difficulty across sets (Ketterlin-Geller, Sparks and McMurrer, 2022). CBM is a system that teachers use to monitor the progress and evaluate the effectiveness of interventions for students with learning difficulties (Deno, 2003). It involves frequent, repeated, administration of short, simple measures that sample global performance in an academic area such as reading (Van den Bosch *et al.*, 2022). CBM measures have been shown to be valid and reliable indicators of student performance and progress (Shin and McMaster, 2019). Progress monitoring using CBM requires that the technical adequacy in terms of the reliability and validity of the assessments used needs to be high. The assessments need to be equivalent to one another and sensitive to student progress even over brief time intervals to enable inferences on student progress. Furthermore, assessments need to be highly practical which means they must be brief so that they can be applied routinely. Finally, the results of such assessments should be easily interpretable (Souvignier *et al.*, 2021). To help teachers in interpreting the data, CBM scores are placed on a progress graph that depicts student growth over time in response to various iterations of an intervention (Van den Bosch *et al.*, 2022). The progress graph lies at the heart of CBM because it guides teachers' instructional decision-making (Deno, 1985).

3.5.2. Standardised testing as a tool for monitoring student progress

Standardised assessments have long been used to assess student performance and school effectiveness (Oyeronke and Adeoye, 2024). These tests provide a uniform measure of student achievement, enabling comparisons across different schools, districts, and national contexts (Oyeronke and Adeoye, 2024). Beyond measurement, they serve multiple purposes across the

educational landscape, including the consistent evaluation of student learning and knowledge acquisition, the generation of data for stakeholders, and their integration into accountability frameworks (Oyeronke and Adeoye, 2024). Importantly, data derived from standardised tests can inform funding decisions, administrative policies, and teacher evaluation processes. In some contexts, performance outcomes are linked to accountability measures, whereby schools may receive additional resources or face sanctions based on results (Oyeronke and Adeoye, 2024). Standardised tests include system monitoring assessments such as Hong Kong's Territory Wide System Assessment, the United States' National Assessment of Educational Progress and Australia's National Assessment Program Literacy and Numeracy, which illustrate the global application of standardised testing as a monitoring tool (Brown, 2022).

Standardised testing originated in the early twentieth century, a period characterised by significant social and educational reforms. The progressive education movement, which began in the early 1900s, sought to make education more inclusive and equitable. In 1905, Alfred Binet and Théodore Simon introduced the Binet-Simon scale, widely regarded as the first modern intelligence test and a precursor to contemporary standardised assessments (Oyeronke and Adeoye, 2024). By the 1920s, standardised tests were widely adopted, reflecting growing efforts among teachers and policymakers to measure student learning and achievement more consistently. The mid-twentieth century marked a significant expansion in standardised testing, driven by growing demands for educational accountability (Kim, 2018). In the twenty-first century, the role of standardised assessments has further evolved, influenced by technological progress, changes in teaching methods, and a deeper understanding of intelligence. Modern developments in standardised testing include the integration of digital assessments, increased attention on holistic evaluation, consideration of social-emotional learning (SEL), international benchmarking and comparisons, and more comprehensive approaches to assessment (Dusenbury *et al.*, 2020; Oyeronke and Adeoye, 2024).

3.5.3. Benefits of standardised testing

When administered and interpreted correctly within specified testing and scoring conditions, standardised tests afford teachers and other educational stakeholders insightful data to inform decision-making regarding student learning (McNamara and McCauley, 2025). Standardised tests play an essential role in educational evaluation, providing a measure of student achievement and school performance. They offer two primary benefits: objectivity and consistency. Advocates of standardised testing argue that it provides objective data on student performance, identifies achievement gaps, and can act as a catalyst for educational system improvement (Oyeronke and Adeoye, 2024). They establish a baseline for student performance, enabling teachers to identify areas where students may be struggling and adapt their teaching methods accordingly (Strand, 2006). Objectivity is ensured through standardised questions and scoring criteria, which minimise variation that could arise from different classroom settings or evaluation methods. This standardisation reduces the risk of bias often associated with other forms of assessment.

Another benefit is the consistency that standardised tests bring across diverse educational settings. Standardised tests create a consistent framework for assessing student performance across schools, districts, states and countries. By applying the same benchmarks and criteria, these tests enable broader comparisons of academic outcomes. This consistency is critical for stakeholders at all levels, helping to identify patterns and inequities in educational achievement (Suna *et al.*, 2020). Standardised tests also provide evidence trends over time, supporting teachers in discerning whether curriculum changes yield positive results or if further adjustments are required. This iterative process supports a culture of continuous improvement, ensuring that curricula remain relevant and effective in meeting students' needs. This data-informed approach can support a more tailored educational experience for students, ultimately improving outcomes (Oyeronke and Adeoye, 2024).

3.5.4. Concerns regarding standardised testing

The early twenty-first century accountability movement reinforced the prominence of standardised testing in education. This policy reflected the perspective that standardised testing could be a critical accountability mechanism, ensuring schools achieved set performance standards. However, the reliance on these assessments has caused considerable discourse among teachers, policymakers and researchers (Oyeronke and Adeoye, 2024). The use of student attainment data and school value-added models in accountability systems has become increasingly prevalent globally (Brill *et al.*, 2018; Prior, Goldstein and Leckie, 2021). Summaries of student performance data, from exams to standardised tests, are often publicly disseminated in the form of high-profile school league tables and are used to judge the effectiveness of schools (Leckie and Goldstein, 2009). The evidence suggests that tying school funding to test scores can perpetuate inequalities and undermine the quality of education for vulnerable student populations (Oyeronke and Adeoye, 2024). The strong emphasis on student attainment in most accountability systems results in a failure to recognise the full breadth of student outcomes, attitudes and behaviours that schools impact (Prior, Goldstein and Leckie, 2021).

There is also substantial discourse within the field as to whether or not standardised assessment data can provide the information needed to support formative assessment practices (Pitsia, Karakolidis and Lehane, 2021). Indeed, standardised testing has been accused of contributing to forms of epistemological erasure, both in its limited ability to measure meaningful learning and in the way results are used in the United States to marginalise non-conforming groups (Cunningham, 2019). It has been argued that standardised tests can lead to test anxiety and serious psychological stress for students. Similarly, when teachers and educational institutions place too much emphasis on standardised tests, the value of humanistic education is overlooked, and inequalities may be exacerbated (Lai, 2023). When there is a strong focus on

accountability, data use can lead to a narrowing of the curriculum due to an emphasis on standardised assessment and achievement in a limited range of topics (e.g., literacy and numeracy) (Datnow and Park, 2018; Teke, Yildirim and Selçuk, 2026). The literature also suggests that the use of standardised assessments to measure student achievement ignores several forms of achievement that cannot be measured such as problem solving-skills, leadership, social activism, community involvement, or questioning and examining power differentials in push back against the forces of oppression (Resch, 2024). It has been argued that standardised tests may not accurately reflect a student's true abilities or potential, neglecting critical thinking, creativity, and practical skills essential for success in the workplace (Holler, 2024; Oyeronke and Adeoye, 2024). Moreover, the literature notes that data use in education should also take into account topics such as arts, physical education and wellbeing of students (Mandinach and Schildkamp, 2021).

Other concerns relate to the fact that they only indicate the performance of a student on a specific day without considering additional factors that influence performance (Resch, 2024). The use of standardised assessments to measure students 'achievement' has been criticised for labelling and stigmatising schools, particularly where they are categorised as failing if a set percentage of students do not score at a predetermined benchmarks (Munoz-Chereau, González and Meyers, 2022; Resch, 2024). Furthermore, studies have shown that socioeconomic status, race and language proficiency can impact test performance, raising questions about the fairness and equity of these assessments (Herman and Cook, 2019).

Standardised testing, often associated with practices commonly described as 'teaching to the test', is a contentious method that emphasises the content and skills measured in exams over a more holistic educational experience. Critics argue that this approach negatively affects the curriculum, limits teacher autonomy, and diminishes student engagement and motivation. Schools tend to concentrate on the subjects and skills that are directly tested, which often results

in less time for important areas like art, music, and physical education, all of which are crucial for a well-rounded education (Oyeronke and Adeoye, 2024). This focus can lead to a narrow educational experience, favouring rote memorisation over deep understanding. Additionally, standardised tests enforce a strict framework on teachers, dictating how they should structure their lessons. This rigidity can suppress creativity and innovation in teaching, creating a classroom environment that may not accommodate diverse learning styles or individual student needs (Oyeronke and Adeoye, 2024).

Critics also contend that the intense focus on test results can prioritise test preparation over educational quality, reducing the depth and diversity of the curriculum (Baldner, 2021). The pressure associated with high-stakes assessments can result in a narrowing of the curriculum, diminishing students' engagement and creativity, and creating an environment of anxiety for both students and teachers (D'Agostino, 2023; Oyeronke and Adeoye, 2024). To address these challenges, the literature advocates for a more balanced approach to educational assessment, incorporating multiple forms of evaluation, including formative assessments, portfolios, and student self-assessment (Oyeronke and Adeoye, 2024). Educational stakeholders must prioritise the development of tests that are culturally responsive and reflective of diverse learning styles (Oyeronke and Adeoye, 2024). Such approaches may support more inclusive educational environments that recognise and value diverse student strengths and capabilities (Oyeronke and Adeoye, 2024).

3.6. International system level monitoring: A global perspective

Literature on international assessment is included because it illuminates the wider data environment within which Irish schools operate. International assessments such as PISA, PIRLS and TIMSS generate comparative evidence about student achievement and educational performance that is interpreted at national and policy levels. These assessments contribute to the growing prominence of data-based comparison, target setting, monitoring and improvement

in education. Although the present study focuses on data use within schools, international assessment literature provides necessary context for understanding how data has become positioned as a legitimate and increasingly expected basis for educational decision-making.

3.6.1 International large-scale assessments (ISLAs)

Current educational reforms, which emphasise school accountability, have been carried out extensively both at national level and at global level (Kim, 2018). Over the last two decades, with the increase in both the numbers of participating jurisdictions and media attention, international large-scale assessments (ISLAs) have come to play a more salient role in global education policies (Braun and Singer, 2019). These global policies influence systems used to monitor student progress and development because they are reflected in national policies at school level. An ISLA is a co-ordinated, international effort to gather credible, comparable evidence of achievement in various cognitive domains, as well as additional information intended to improve the interpretability of the results (Braun and Singer, 2019). Countries use ISLAs to benchmark their performance against peers and to gather policy insights from other jurisdictions that consistently achieve high rankings or have demonstrated rapid improvements (Braun and Singer, 2019). The results from these tests have drawn the attention of governments, international aid agencies, teachers, researchers, and the public (Danish Shakeel and Dills, 2024).

3.6.2. The Programme for International Student Assessment (PISA)

The Organisation for Economic Co-operation and Development (OECD) has played a leading role in educational reform by proposing key policies for global education reform and by constructing reform discourses around the world (Kim, 2018). The Programme for International Student Assessment (PISA) is an education survey conducted by the OECD. The main purpose of PISA is to measure students' ability to use the knowledge and skills learned at school in daily life (İdil, Gülen and Dönmez, 2024). PISA was first implemented in 2000 and

is conducted every three years. The usual pattern of the PISA cycle was interrupted due to the COVID-19 pandemic when the planned implementation of the main study in 2021 was delayed one year to 2022 (Donohue *et al.*, 2023). In PISA, data from the subject areas of mathematics literacy, science literacy and reading skills, along with information on students' motivation, views about themselves, learning styles, school environments and families are collected. PISA 2022 was administered in 81 participating countries/economies, including 37 OECD countries, with tests and questionnaires completed by 690,000 students internationally. In Ireland, 5569 students in 170 schools took part, with the majority of participants in Transition Year and third year, with smaller proportions in the remaining years (Donohue *et al.*, 2023). The assessment has been administered digitally in Ireland since 2015. Internationally, the majority of participating countries/ economies administered PISA 2022 on computer, with only four countries (Cambodia, Guatemala, Paraguay and Vietnam) administering PISA on paper instruments.

PISA is a significant study both for individuals and for wider society (Donohue *et al.*, 2023). Obtaining a precise measure of student achievement in the three core PISA domains (mathematics, reading and science) at ages 15/16 can offer a valuable insight into the future. Internationally, poor achievement outcomes are associated with a higher risk of early school leaving while, conversely, higher achievers are more likely to progress to higher education, and to work in skilled employment by age 25 (OECD, 2018). What is unique about PISA is that its technology-based assessments were administered in 90 language versions, an enormous task in management, content development, presentation, response collection, scoring and analysis (Bennett, 2018). Through PISA, students' learning outcomes are represented by numbers that allow each participating country to assess the effectiveness of their education systems and thus diagnose whether success (higher scores and rankings) is achieved at an international level. As

a result, comparison and competition at a global level has been used as a basis for rationalising discourse related to education reforms in each country (Kim, 2018).

3.6.3. Trends in International Maths and Science Study (TIMSS)

The Trends in International Maths and Science Study (TIMSS) is a study co-ordinated by the International Association for the Evaluation of Educational Achievement and measures the mathematics and science achievement of Grade 4 (Fourth Class) and Grade 8 (Second Year) students internationally on a four-year cycle. This contrasts with PISA which uses an age-based sample on a three-year cycle. Additional differences with PISA are that mathematics and science are given equal weighting in TIMSS as opposed to there being a main and minor domains, and that TIMSS assessments are curriculum-based rather than focusing on real world skills (Donohue *et al.*, 2023).

3.6.4. Progress in International Reading Literacy Study (PIRLS)

The Progress in International Reading Literacy Study (PIRLS) is an international study of reading literacy at Grade 4 (Fourth Class) that is also implemented by the International Association for the Evaluation of Educational Achievement on a five-year cycle. In 2021, Ireland participated in PIRLS for the third consecutive time, and was one of 57 countries that took part (Donohue *et al.*, 2023). Each participating student is asked to read two texts and respond to the accompanying questions. Texts used in PIRLS are classified by the main purpose for which they are read: the literary experience or to acquire and use information. PIRLS also administers questionnaires to gather contextual information from students, their parents, their class teachers, and their school principals. This facilitates the examination of how demographics, home resources, classroom experiences, and school characteristics may be associated with reading achievement within and across countries (Delaney *et al.*, 2023). In PIRLS 2021, 26 countries and 7 benchmarking entities transitioned to digital assessment as

their primary mode of data collection, while also administering the paper-based trend texts replicated from PIRLS 2016 to a 'bridge' sample (Mullis *et al.*, 2023).

3.7. The datafication of education

The ongoing digitisation of education over the past 20 years or so has seen dramatic increases in the volume and scope of data being generated through the use of digital devices, systems and software in education (Selwyn, Pangrazio and Cumbo, 2022; Pangrazio, Selwyn and Cumbo, 2023b; Shi, 2025). This has prompted a growing body of discourse around the 'datafication' of education i.e. the representation of individual practices and institutional processes in digital data which are collected, aggregated and processed to track, profile and predict student behaviour and learning (Pangrazio, Selwyn and Cumbo, 2023b). Valadas *et al.* (2022, p. 67) suggest that the school organisation is 'invaded by technologies' with regards to 'planning, organization, coordination, and other administrative roles'. Furthermore, the availability of data and corresponding algorithms introduces new ways to measure, capture, describe and represent social life in numbers. Consequently, datafication is reshaping the role of teachers, teaching practices, and the teaching profession (Alirezabeigi and Decuypere, 2025). The datafication of education is also closely linked to the increasing involvement of private sector actors in the design and provision of digital infrastructures for schools. A 'lucrative industry' has emerged around data-driven educational technologies with companies developing tools to capture and analyse student data (Williamson, 2019, p. 1). Recent research highlights a shift towards the 'platformisation' of schooling, whereby large technology providers offer integrated systems that manage everything from student performance monitoring to administrative functions, embedding private actors deeply within educational data infrastructures (Pangrazio, Selwyn and Cumbo, 2023a; Pangrazio, Duffy and Zomer, 2025).

This increasing datafication of education transforms not only the ways in which learning and teaching are organised but also the ways in which future generations will construct reality with and through data (Jarke and Breiter, 2019). The datafication of education comprises the collection of data on all levels of educational systems (individual, classroom, school, region, state, international), and potentially about all processes of teaching, learning and school management. This proliferation of data is reshaping decision-making and opinion-forming processes of educational stakeholders such as education policy, school supervision, school authorities, teachers, students and parents (Jarke and Breiter, 2019). For example, data are employed to improve school development, to hold schools and teachers accountable to control access to schooling and to compare student achievements across countries. Such use raises expectations relating to increased transparency, accountability, service orientation and civic participation but also associated fears relating to surveillance and control, privacy issues, power relations and inequalities (Selwyn, 2015; Lupton and Williamson, 2017; Jarke and Breiter, 2019). Within the educational context, increasing amounts and greater heterogeneity of data are being generated for monitoring, surveillance or evaluation purposes, as well as automatically through the routine operations of a wide range of digital devices and systems that produce digital traces (Selwyn, 2015; Breiter and Hepp, 2018; Perrotta *et al.*, 2021). However, the underlying algorithms and the ways in which data are produced by data providers' statisticians as well as the role of software companies and educational technology providers are little understood (Jarke and Breiter, 2019).

3.7.1. Student experience and concerns

In contrast to enthusiasm about the potential benefits of the analytic application of educational data to enhance students' learning, concerns are growing over the possible damaging changes to the nature and conditions of schools (Pangrazio, Selwyn and Cumbo, 2023b). The pace at which technology is developing and being utilised in schools makes it challenging for

departments of education, school leaders, managers and administrators to be fully aware of the quantities of digital data being generated within classrooms, let alone how this data is subsequently being used and by whom. The literature surrounding the 'datafication' of schools has tended to centre on institutional issues of governance and commercialisation, while comparatively little empirical attention has been given to students' experiences of digital data in schools. Increasingly, concerns are being raised over students' relative lack of awareness and control over the datafication of their schooling (Pangrazio, Selwyn and Cumbo, 2023b). For example, it has been suggested that students have no way of knowing what data-driven records, profiles and other representations are created in relation to their educational activities, and for what reasons such entities are being created (Sefton-Green, 2022).

Of particular interest is the wide variety of 'trace data' now being extracted from the array of technologies and used within schools daily. In a typical secondary school, classwork and homework are completed on commercial platforms owned by Google and Microsoft, student behaviours are monitored through apps such as Class Dojo, and cameras and sensors are used to monitor classrooms and schoolgrounds (Pangrazio, Selwyn and Cumbo, 2023b). Consequently, students are routinely placed in situations where large amounts of data relating to themselves are generated and collected with little or no opportunity to opt out (Pangrazio, Selwyn and Cumbo, 2023b). Drawing on focus group discussions with 62 students across three Australian secondary schools, one such study explores students' experiences of school datafication in terms of power, surveillance and affect. It emphasises students' relatively constrained and distanced relations with school technology use, schools' use of data to enforce student accountability, and self-regulation of behaviour, as well as students' perceived powerlessness to engage agentically in digital practices. Drawing on notions of 'digital resignation' and 'surveillance realism', this study also considers the extent to which students

might be supported to meaningfully engage with (and possibly resist) the constraining 'atmospheres' of datafication (Pangrazio, Selwyn and Cumbo, 2023b, p. 227).

3.7.2. Technological systems for monitoring student progress

Over the last several years, technology has become an essential tool to support students and teachers in creating more effective educational experiences (Sousa *et al.*, 2021). The rapid expansion of online learning environments (e.g. learning management systems, student diaries, library systems, digital repositories, and academic systems) has significantly increased the volume of data generated about the educational process (Gaftandzhieva, Docheva and Doneva, 2021). These digital footprints can help learning and teaching practices to promote better student achievement and support teachers' practices (Sousa *et al.*, 2021).

Despite the rapid growth and popularity of data systems in education, few studies systematically explore the manner in which data systems are being used by teachers and school leaders to inform their practice (Drake, 2021). The broader research literature on the employment of information systems contains the common lament that although technology rapidly expanded organisational capacity to store, process and analyse data through data warehouses, dashboards, and tools, these systems have been found to be largely underutilised, yielding relatively weak returns on investment (Drake, 2021; Zomer, Pangrazio and Matovich, 2025). Reasons for this underutilisation include ascriptive characteristics such as age and gender, individuals' expectations regarding the systems' performance (e.g. perceived usefulness, job fit, outcome expectations), its effort expectancy (e.g., perceived ease of use, complexity) and other social factors (Drake, 2021).

Research regarding teachers' use of data software and dashboards that provide information on student performance similarly report low utilisation rates, with little to no relationship to improved student achievement (Wayman, Shaw and Cho, 2017). These studies suggest that factors such as personal characteristics (e.g. years' experience), school context (e.g. school

level), and technical barriers may contribute to variation in data systems use, though the findings are not consistent across all studies (Wayman, Shaw and Cho, 2017). The small body of research that does exist indicates that investment in data systems encourages teachers' use of data, but with limited or inconsistent effects on student performance (Drake, 2021). While online data tools can support teachers' use of student performance information, their individual capacity for analysing the data seems to moderate this relationship (Drake, 2021). A series of studies on teachers' use of the acuity assessment system, which focuses on providing teachers with the capacity to access and analyse benchmark performance results, suggest that its use is associated with modest gains in student performance, although the findings are not consistent across implementation years, grade levels and school districts (Wayman, Shaw and Cho, 2017).

3.7.3. Components of student monitoring systems

The monitoring of student progress and development has several elements: identifying and measuring academic goals; providing a tool for understanding how students are progressing toward established goals; creating opportunities for class-, school-, and/or district-wide screening to identify students potentially at risk for academic failure; and providing data that offer accountability evidence to parents and teachers about the impact of intervention programmes (Prior, Goldstein and Leckie, 2021). Central to the effort to encourage data use among teachers is the development of data systems that link students, teachers, and schools in longitudinal databases. In the US to date, hundreds of millions of dollars have been invested at the federal, state, and local level to develop robust data systems, tools, and dashboards that provide teachers with access to education data. In addition, private sector actors have invested in tools and software to support learning analytics in education (Drake, 2021). Despite these investments, the literature highlights a persistent 'productivity paradox', whereby such systems yield relatively weak returns on investment (Drake, 2021, p. 86) It is clear that caution

is warranted in assuming that big data and data systems will necessarily lead to improved student performance (Drake, 2021).

3.7.4. Educational data and data protection

Educational data and learning analytics offer insights for improving education through large-scale empirical analysis of data generated from student information and student interactions with educational technology tools (Reidenberg and Schaub, 2018). Such learning technologies also create ethical tensions between privacy and the use of education data for school improvement (Reidenberg and Schaub, 2018). Learning analytics research has benefited from a longstanding discourse regarding data integrity, ethics and accountability (Selwyn, 2019). The privacy of student information is vital for schools because of the adverse impact that inappropriate uses or disclosures may have on student learning and social development (Reidenberg and Schaub, 2018). The mass collection and centralisation of student information pose significant threats to student privacy and raises questions about data ownership and consent (Reidenberg and Schaub, 2018). While recognising that technological innovations in education bring considerable advances, privacy safeguards must be provided for students regardless of changes to the educational landscape (Reidenberg and Schaub, 2018). Technological measures should provide transparency about data uses, provide accountability for algorithmic decisions, and ensure the security of students' data. Such technological measures need to be complemented by organisational safeguards that appropriately limit access to educational data and outcomes of educational data mining (Reidenberg and Schaub, 2018). Since school systems are major clients of educational technology vendors, public procurement criteria should provide leverage to assure that appropriate safeguards are integrated into big data technology for education (Reidenberg and Schaub, 2018). The literature argues for comprehensive educational impact assessments of learning analytics systems that consider their overall educational impact, aiming to align system design with both pedagogical

objectives and privacy considerations. Additionally, legal protections for educational privacy must adapt to the realities of data-driven learning by explicitly extending privacy safeguards to encompass learning analytics. Moreover, mandatory inclusion of privacy impact assessments and precautionary measures should be integral to the development and implementation of such systems in educational settings. Therefore, public procurement policies should serve as a crucial tool to enforce privacy-by-design principles in big data initiatives within education (Reidenberg and Schaub, 2018).

3.8. How schools use student progress monitoring data

3.8.1. Learning analytics

The use of learning analytics (LA) is a key element of contemporary education. In recent years, learning analytics has emerged as a promising area of research that extracts useful information from educational databases to understand students' progress and performance (Gaftandzhieva, Docheva and Doneva, 2021). With the increase in the amount of educational data, improved data storage and handling, and advances in computing and related analytics tools and algorithms, educational organisations are starting to embrace learning analytics. Learning analytics assess, elicit and analyse static and dynamic information about learning and learning environments for real-time modelling, prediction and optimisation of learning processes and environments, as well as educational decision-making in an organisation (Blasi, 2017; Ifenthaler, 2021). Learning analytics emerged as a field that focuses on collecting, analysing, and reporting data about learners and contexts in which learning occurs (Sousa *et al.*, 2021). Research in secondary schools in Belgium, Ireland, Italy and Spain suggests that there is a role for learning analytics in supporting internal school development (QUALAS, 2026). However, there is limited research related to secondary education and learning analytics, as much of the research is focused on higher education (Martínez-Monés *et al.*, 2024). The use of learning

analytics tools can support teaching and learning, but teachers' use of these is a complex process that must be better understood to encourage uptake (Khulbe *et al.*, 2025).

3.8.2. Analysing and predicting students' academic performance using educational data mining

Educational Data Mining (EDM) is the process of extracting useful information and knowledge from educational data (Sarker *et al.*, 2024). EDM identifies patterns and trends from educational data, which can be used to improve academic curriculum, teaching and assessment methods, and students' academic performance (Sarker *et al.*, 2024). Data mining can help us identify the reasons behind poor academic performance and can also elicit valuable insights into current performance trends and potential improvements (Sarker *et al.*, 2024). Student performance analysis and prediction are two widely explored research topics in education system literature (Khan and Ghosh, 2021; Seckin Kapucu *et al.*, 2024). Although their objectives are different, the outcomes of performance analysis significantly influence the prediction studies (Khan and Ghosh, 2021). The prediction of academic performance, in its most varied forms, has received considerable attention in the area of education, especially concerning higher education (Rodrigues *et al.*, 2022). Effective performance prediction systems can enable teachers to provide a more targeted approach to resource allocation and instruction (Hellas *et al.*, 2018). Identifying students who might exhibit lower performance as early as possible is a critical strategy for educational institutions, enabling them to take preventive measures to address potential shortcomings and provide an optimal learning experience (Rodrigues *et al.*, 2022). Additionally, forecasting academic performance can aid in recognising students with exceptional potential (Rodrigues *et al.*, 2022). In educational data mining, classification algorithms such as decision tree approaches (e.g., Random Tree, REPTree, LADTree, J48) , Naïve Bayes, Support Vector Machine (SVM), Artificial Neural Networks (ANN), K-Nearest Neighnor, SMO, Linear Regression, Random Forest, are used to predict student academic performance (Dol and Jawandhiya, 2024).

Current literature on educational data mining demonstrates widespread global research activity; however, it rarely specifies direct deployment of individual algorithms within national school systems, instead focusing on experimental or institutional applications (Almalawi *et al.*, 2024; Romero and Ventura, 2024). There are a large number of variables that must be taken into account when predicting student performance including gender, grade, father (education level), mother (education level), living with parents, number of siblings, having a room, child's travel time to school, weekly allocated study time, time spent on phone, tablet, and computer out of the lessons, having breakfast and lunch regularly, average sleeping time, having a hobby or out-of-lesson activity, the number of books read per year, spending quality time outside school, having friends, family helping students in their study and time spent reviewing subjects (Seckin Kapucu *et al.*, 2024).

However, according to Livieris *et al.*, (2019) forecasting students' academic performance, or even detecting those at risk of underachievement, is inherently complex and demanding; moreover, when such students are eventually identified, it is often too late to effectively prevent failure. While predictive analytics and educational data mining have been promoted as tools to address this challenge, a growing body of research highlights significant limitations and risks in their application. There are issues of transparency and interpretability with many machine learning models operating as 'black boxes', making it difficult for teachers to understand how predictions are generated or how to act upon them (Guevara-Reyes *et al.*, 2025, p. 3). Cao and Mai (2025) expand further on the critical limitation concerning the translation from prediction to intervention. Even when systems successfully identify at-risk students, this does not guarantee that effective support mechanisms are in place. Research indicates that predictive insights often fail to translate into timely, targeted, and scalable interventions, weakening their overall impact (Cao and Mai, 2025). Indeed, there are broader ethical and privacy concerns related to the extensive collection and use of student data. Predictive systems frequently rely

on large volumes of sensitive personal, behavioural, and demographic data, raising questions about consent, surveillance, and data security (Dritsas and Trigka, 2025).

3.8.3. Organisational benefits from learning analytics

Current learning analytics literature and practice in Australia, the United Kingdom and the United States is proving its value in addressing issues related to successful studying and identification of students at risk and monitoring and improving organisational capacities (Ifenthaler, 2021). Governance facilitates cross-organisational analytics by incorporating data from all levels of learning analytics initiatives. Based on common data standards and open data schemas, rich datasets enable the identification and validation of patterns within and across organisations. This, in turn, provides valuable insights for informing educational policy making (Ifenthaler, 2021). At the macro level, organisational-wide analytics enable a comprehensive insight of learner cohorts to optimise processes. These include allocating critical resources to support the retention rates and predict school performance (based on individual student performance) (Ifenthaler, 2021). An essential prerequisite of learning analytics benefits is recognising the purpose of the data and analytics. These can be broken down to: summative and descriptive-detailed insights after completing of a learning phase often compared against previously defined reference points or benchmarks; formative and (near) real-time, which uses on-going information for improving processes through direct interventions; predictive and prescriptive, which forecast the probability of outcomes in order to plan for future interventions, strategies and actions (Ifenthaler, 2021).

3.8.4. Benefits of the using of learning analytics for students, teachers and parents

The research reflects both supportive and critical perspectives on the datafication in education in relation to students, teachers and parents (Shi, 2025). The use of learning analytics can bring concrete benefits for students, teachers and schools (QUALAS, 2026). The large amount of student data, such as demographic information, results and student behaviours, expands the

possibilities of retention strategies and academic success, thus moving away from levelling by the average, to meet the needs of each student in a personalised and data orientated way (Aguerrebere *et al.*, 2017). The capacity to predict student performance creates opportunities to improve educational outcomes (Hellas *et al.*, 2018; QUALAS, 2026). Encouraging students to set achievement goals is increasingly recognised as a key practice within learning analytics-supported environments, as such systems enable students to interpret their learning data and translate it into actionable targets (Vreugd, Leeuwen and Schaaf, 2025). Learning analytics dashboards, in particular, support students in evaluating their study behaviours, thereby enabling the formulation and monitoring of meaningful goals linked to academic progress (Vreugd, Leeuwen and Schaaf, 2025). This process aligns closely with self-regulated learning, where goal setting is a central mechanism connecting feedback, monitoring, and improved academic outcomes (Buvari *et al.*, 2023).

Learning analytics tools also provide parents with ongoing information about the progress of their children (Gaftandzhieva, Docheva and Doneva, 2021). Liem et al. (2025) highlight the significance of collaborative efforts between parents and teachers to enhance academic functioning, motivation and wellbeing. Drawing on Hartong and Manolev's (2023) conceptualisation of the professionalism of parenting, parents are constructed as empowered actors insofar as they are granted access to real-time digital updates, effectively assuming the role of data overseers. Such a framing risks narrowing parental involvement to practices of data management and performance surveillance, thus overlooking the complex social realities that shape family-school relations (Shi, 2025).

In educational contexts, Artificial Intelligence (AI) and innovations in learning analytics are heralding a significant transformation by both enabling novel teaching and learning strategies (Markauskaite *et al.*, 2022) and, simultaneously, challenging contemporary assessment practices (Swiecki *et al.*, 2022). Emerging LA and AI in Education (AIED) systems offer

innovative data-intensive solutions that promise to facilitate adaptive and personalised teaching and learning experiences at scale (Alfredo, Echeverria, Jin, Yan, *et al.*, 2024). For example, intelligent tutoring systems and LA solutions offer personalised learning support and automated feedback (Cavalcanti *et al.*, 2021; Maier and Klotz, 2022). Certainly LA dashboards are providing teachers with new ways to track student progress and offer targeted support, potentially leading to improved student outcomes (Williamson and Kizilcec, 2022; Kerssens, 2023).

3.8.5. Key concerns regarding learning analytics

The collection, processing, and use of data to improve teacher practices and learner experiences are fundamental concerns in the field of learning analytics (Ahn *et al.*, 2019). However, the proliferation of LA/AIED systems raises key concerns about the privacy of students and the security of educational data (Viberg, Mutimukwe and Grönlund, 2022), as well as the potential for algorithms to perpetuate biases and discriminations (Uttamchandani and Quick, 2022). The process of using LA to improve teaching works from the assumption that data should be readily shared between stakeholders in an educational organisation. However, the design of learning analytic tools often does not account for considerations such as data privacy, transparency and trust among stakeholders (Ahn *et al.*, 2021). Machine learning (ML) systems, which trawl through huge amounts of student and learning data, learn biases due to technical design errors but also by picking up on existing patterns of inequality and discrimination (Sahlgren, 2021; Holmes *et al.*, 2022). The lack of involvement of students and teachers in the design and development of LA/AIED systems can potentially lead to a lack of understanding and trust in the technology (Alzahrani *et al.*, 2023). This absence of participation also raises questions about the accountability and transparency of AI in education (Tsai, Perrotta and Gašević, 2020). It is imperative to address these concerns and incorporate the perspectives and needs of students and teachers in designing and implementing LA/AIED systems (Alfredo, Echeverria, Jin, Yan,

et al., 2024). This can potentially contribute to creating ethical, effective and inclusive ways to adopt LA/AIED systems (Williamson and Kizilcec, 2022).

In response to these concerns, there has been a growing interest in adopting human-centred design (HCD) approaches that prioritise human needs, values, and perspectives in the design and deployment of LA/AIED systems (Martinez-Maldonado, 2023). Beyond education, there is also an increasing interest in applying similar human-centred principles in the emerging discipline of Human-Centred AI (HCAI) (Alfredo, Echeverria, Jin, Yan, *et al.*, 2024). A HCAI approach sees AI as systems aimed at aiding human interests as opposed to as a means of achieving technical goals or replacing humans (Usmani, Happonen and Watada, 2023). Hence, the design of HCAI systems is to be guided by a set of ethical principles and design guidelines that empower end-users (Alfredo, Echeverria, Jin, Yan, *et al.*, 2024). The objective is to ensure that technologies providing high automation capabilities are created in ways that guarantee their credibility, transparency, and benefit to society (Ozmen Garibay *et al.*, 2023; Usmani, Happonen and Watada, 2023).

In recent years, the concept of HCAI has achieved substantial attention in learning analytic and AIED with an increasing recognition of the significance of considering educational stakeholders' needs and viewpoints in the design and deployment of data-intensive innovations (Alfredo, Echeverria, Jin, Swiecki, *et al.*, 2024). This includes, for example, the use of participatory design and co-design methods to involve teachers (Ahn *et al.*, 2021), students (Sarmiento, Campos and Wise, 2020), and other educational stakeholders (Schmitz *et al.*, 2022), in the co-creation of LA/AIED systems, the development of ethical frameworks tailored to these technologies (Holmes *et al.*, 2022), and efforts to open the AI 'black box' by making analytics more transparent and understandable (Khosravi *et al.*, 2022, p. 19).

3.8.6. Learning analytics' challenges for organisations

Recent research in secondary schools in Belgium, Ireland, Italy and Spain suggest that schools are experiencing common challenges across countries including low data literacy and interpretive uncertainty, workload concerns, fragmented data systems, risk of bureaucratic or control-oriented use, need for collaboration and different levels of experience among teachers (QUALAS, 2026). Tsai and Gasevic (2017) suggest several challenges for organisations implementing learning analytics initiatives. These include insufficient leadership in planning and monitoring learning analytics implementation and the organisational change process. An inconsistent understanding of and commitment to the process by stakeholders, namely administrative, technical and teaching staff, can also pose a challenge for learning organisations implementing learning analytic initiatives. This includes insufficient professional training for teaching staff, support staff and technical staff on the benefits and limitations of learning analytics or its technical infrastructure. A lack of pedagogical concepts and general awareness about the organisation's learning culture driving the expected benefits for learning and teaching also poses a challenge.

Furthermore, insufficient rigorous empirical evidence on the effectiveness of learning analytics to support organisational decision-making and a dearth of policies, regulations, and codes of practice on privacy and ethics in learning analytics results in challenges for organisations utilising such tools (Tsai and Gasevic, 2017). Leitner, Ebner, and Ebner (2019) propose a framework comprising seven key elements to guide organisation-wide learning analytics initiatives. These elements include: (1) establishing the benefits of learning analytics for students, teachers, researchers, and administrators; (2) ensuring stakeholders can access actionable insights through dashboards; (3) fostering transparent communication with all stakeholders while adhering to core principles and relevant regulations, such as the EU's General Data Protection Regulation, particularly regarding privacy; (4) developing and

maintaining an IT infrastructure that fulfils the initiative's needs, which could be provided internally by the organisation or through external providers; (5) creating scalable learning analytics functions that the organisation can oversee and assess; (6) adopting a code of conduct; and (7) establishing ethical guidelines for learning analytics that are sensitive to varying cultural settings (Leitner, Ebner and Ebner, 2019).

3.9. Purpose and benefits of monitoring student progress and development

3.9.1. Benefits of monitoring student progress for students

Does monitoring data make a difference to student achievement? Despite the field's confidence on this subject, relatively few studies have attempted to quantify the effects of data use (Van Geel *et al.*, 2016; Wayman, Shaw and Cho, 2017). Those studies that do exist rarely include the perspectives of students (Francis *et al.*, 2020; Paolucci *et al.*, 2024). The literature confirms that monitoring student progress and the effective use of monitoring systems positively influence student performance (Howie, Scherman and van Staden, 2017). Research also indicates that teacher monitoring and academic support are associated with improved student outcomes, including school satisfaction, hope, grit and academic success (Lei, Cui and Chiu, 2018; Gao *et al.*, 2023; Peker and Cengiz, 2023). For example, a study involving 720 Turkish secondary school students found that perceived academic monitoring and support from teachers were positively related to school satisfaction, hope and academic grit, while also fostering a sense of care that enhanced students' confidence and resilience (Peker and Cengiz, 2023).

In another study, the effects of a two-year data-based decision-making intervention on student achievement growth were investigated. Fifty-three primary schools in the Netherlands participated in the project, and student achievement data were collected over the two years before and two years during the intervention. Linear mixed models were used to analyse the differential effect of data use on student achievement. A positive mean intervention effect was estimated, with an average effect of approximately one extra month of schooling. The findings

of this study indicate that data-based decision-making using student achievement data from standardised assessments can improve student achievement, although effects differ across schools. Furthermore, the results suggest that the intervention significantly improved the performances of students in low socioeconomic status schools (Van Geel *et al.*, 2016). In addition, monitoring students' academic activities such as homework, studying, goal-setting and success in exams, can increase students' levels of hope which is an important factor affecting school satisfaction (Nie *et al.*, 2019; Bryce, Granger and Fraser, 2022). Monitoring and support provided by teachers can also increase academic resilience by supporting students to adapt flexibly in their work at school (Yeager and Dweck, 2012; Lee and Ha, 2023).

3.9.1.1. Student participation in monitoring of progress and development

Despite the widespread use of progress monitoring by schools, relatively little attention is devoted to active student participation in this practice. Monitoring is often conducted for students, rather than being a collaborative process that is completed with students (Furey and Loftus-Rattan, 2022). Furey and Loftus-Rattan (2022) describe a six-step performance feedback and goal setting routine that can benefit students with learning difficulties and students at risk of academic failure. This systematic and intentional routine entails explicit performance feedback, specific, true and positive feedback, collaborative data graphing, collaborative data analysis, reflective questioning, and collaborative goal setting (Furey and Loftus-Rattan, 2022). This brief routine nurtures student motivation through a self-determination perspective which fosters student autonomy, competence and relatedness.

3.9.2. Benefits of monitoring student progress for schools

Monitoring data from local, national and international assessment tools influence school policies and practice. For example, international comparisons of educational attainment have increased the level of value placed on quality assurance in schools to enable countries to perform competitively on a global scale (Torrance and Humes, 2015; Brown, McNamara and

O'Hara, 2016; Skerritt *et al.*, 2021). For example, 'Opbrengstgerichtwerken' (results-oriented work) is a Dutch term that was introduced in 2007 by the Dutch government in response to the apparently declining performance of students in the core subjects on international assessments such as PISA, PIRLS, and TIMSS. The goal was to improve student performance especially in the core subjects of arithmetic/mathematics, language and reading through the effective use of data retrieved from digital student monitoring systems. This response was to be combined with a goal-oriented approach which provided tailor-made instruction matching the observed ability levels and instructional needs of students (Visscher, 2021). The evaluation, analysis, and interpretation of student progress data benefits schools by forming the basis for creating whole-school goals that are specific, measurable, achievable, time-bound and challenging.

3.9.3. Benefits of monitoring student progress for teachers

Success in education in contemporary settings is defined as ensuring achievement for every student (Vilanova *et al.*, 2019). To reach this goal, school leaders and teachers need tools to assist them to identify students who are at risk academically and adjust instructional strategies to better meet these students' needs. At the close of the 19th century, John Dewey (1897) wrote:

> 'Education must begin with a psychological insight into the child's capacities, interests, and habits. It must be controlled at every point by reference to those same considerations…These powers, interests, and habits must be continually interpreted-we must know what they mean…. I believe that all questions of the grading of the child and his promotion should be determined by reference to the same standard'.

This sentiment was echoed in the United States in 2001 in the No Child Left Behind Act (NCLB) which established provisions for annual standardised testing in every grade to give teachers the data necessary to support teach student's academic achievement. The most prominent feature of NCLB was that the assessment and measurement of the standards were more important than ever, and it emphasised the high-stakes accountability of schooling. NCLB's accountability through assessment was reflected in the 'Adequate Yearly Progress'

(AYP) concept. AYP was a measurable indicator of the level to which students met the set standards year by year, and every state had to prove it in accordance with the NCLB Act (Kim, 2018). Although written 104 years apart, these two ideas demonstrate similarities: teachers need information about students' achievement to plan their learning, and they must evaluate that progress by reference to common standards. Data use, in part, originated in the United States as a result of the NCLB Act, and has continued in Every Student Succeeds Act (ESSA) in which learning outcomes were defined in terms of results and attaining specified targets.

The current focus on data is a powerful force behind school reform strategies. School leaders and teachers in the United States are inundated with data and increased expectations for data-driven practices as part of federal education policy in an effort to promote educational reform (Abrams, Varier and Mehdi, 2021). The extensive implementation of state-mandated assessments resulted in the administration of periodic or interim testing as measures to monitor student progress towards meeting end-of-year achievement targets (Mandinach and Schildkamp, 2021). Coupled with software that integrated assessment administration and analysis, teachers have real time resources to monitor learning and identify and address gaps in student understanding, prior to state examination administration (Abrams, Varier and Mehdi, 2021).

The primary purpose of the NCLB policy involved the continual monitoring and interpretation of performance data so that teachers could identify students who risk not meeting standards early and measures be put in place to provide additional support. Once difficulties have been clearly identified, teachers will have detailed information to plan instruction in response to specific student needs, and continuous monitoring of student progress will facilitate teachers to adapt their instruction to ensure successful learning outcomes. This stimulated the use of data for informing teaching and learning in schools in the United States, but most often, for the

purposes of accountability and compliance, rather than continuous improvement (Mandinach and Schildkamp, 2021).

In the last decade a change from a sole focus on accountability to an emphasis on continuous improvement occurred. Data use has shifted towards a more sociocultural paradigm where, instead of just acknowledging the context or controlling it, the emphasis is on the process of data use within a particular context (Mandinach and Schildkamp, 2021). This means that a reliance only on test scores and indicators of student performance is inadequate. Teachers need data such as demographics, attendance, health, transportation, justice, motivation, circumstances and special designations, to contextualise student performance and behaviour. These alternative sources of data are not intended to replace essential data around student performance, but to provide explanations and context to help teachers better understand and interpret what the data mean (Mandinach and Schildkamp, 2021).

The widespread use of benchmark testing in the United States has become closely linked to formative assessment by those in the testing industry (Abrams, McMillan and Wetzel, 2015). Formative assessment has traditionally centred on a process in which data produced from classroom assessments is used to provide feedback to students and instructional correctives. However, accountability demands have led to the popularity of tests that have been termed ‘interim’, ‘benchmark’, ‘periodic’ or ‘quarterly’ testing at school or district level that is often labelled ‘formative’ (Abrams, Varier and Mehdi, 2021, p. 348). While benchmark testing has been marketed as formative assessment, research on the effectiveness of formative assessment has noted it as a practice that is embedded in classroom instruction (Abrams, McMillan and Wetzel, 2015). While there is very little research that explores how benchmark testing data are used as formative assessment as defined by the classroom assessment literature, one such study which involved fifteen focus group sessions with 67 elementary and middle school teachers in Virginia noted that under appropriate conditions, including having valid and transparent test

items, support, immediacy of results, and time to discuss with others, benchmark testing programmes have the potential of providing meaningful formative assessment (Abrams, McMillan and Wetzel, 2015).

Facing pressures to improve student achievement, teachers have become increasingly focused on using new forms of student data to improve their instructional practices (Wayman, Shaw and Cho, 2017). The monitoring of student progress and development is a valuable approach that can illicit feedback to teachers about how students respond to instruction (Gebhardt *et al.*, 2023). The monitoring of learning depends on the ability to evaluate the progress students make over time (Savage and Bentley, 2017). Progress monitoring is a formative diagnostic that enables the measurement and evaluation of learning development at multiple points in time, providing feedback to teachers and students. Such achievement measurements must be conducted early and repeatedly over the course of the learning process if performance assessments are to be used for educational decision-making (Souvignier *et al.*, 2021). Unlike summative assessment, which measures learning outcomes, formative progress monitoring seeks to measure for the purpose of supporting learning (Gebhardt *et al.*, 2023). Since these considerations relate to the theoretical frameworks of formative assessment and data-informed decision-making, it follows that providing teachers with assessment information about students' levels of achievement and about their learning progress is a promising approach to improve instruction and, hence, students' learning outcomes (Souvignier *et al.*, 2021).

Teachers have engaged in monitoring of student progress for at least the past 40 years, and those efforts have intensified over the past 10 years as part of collaborative problem solving, intervention response, and the requirement to monitor the extent to which students are benefiting from evidence-based interventions. 'Is my instruction beneficial for my students?' 'How can I adapt my instruction to students' individual needs?' (Souvignier *et al.*, 2021, p. 283) A key response to these important questions is to obtain objective, reliable, and valid

measurements about student progress and attainment. Progress monitoring is a practice that assists teachers to use student performance data to evaluate the effectiveness of their teaching and to make informed decisions regarding teaching and learning. Progress monitoring is used to inform decisions teachers make during the process of instruction or intervention. Progress monitoring data alert teachers when particular students are not progressing at acceptable rates. This data are typically graphed, providing visual feedback to teachers regarding the student's progress in an academic skill area (Furey and Loftus-Rattan, 2022).

Teachers' use of student achievement data to improve teaching quality is multifaceted and challenging (Visscher, 2021). It relies on the notion that assessment data can support classroom instruction by influencing decisions about instructional goals, selection of teaching methods, and time allocation (Reeves, Summers and Grove, 2016). The literature provides evidence of a largely positive relationship between teachers' data use to improve the quality of their instruction and students' learning progress (Van Geel *et al.*, 2016; Hebbecker *et al.*, 2022). This positive teacher support impacts students' determination to achieve their long-term goals (Sahar, Lea-Baranovich and Tharbe, 2021). Van Geel *et al*. (2016) identify the following five steps that teachers should carry out after receiving test results: Firstly, teachers evaluate and analyse the students' achievement in their classroom. Secondly, teachers establish goals for instruction that relate to competence development. Thirdly, teachers determine an actionable strategy to adapt classroom instruction to accomplish their goals. Fourthly, teachers implement the instructional strategy as part of their teacher practices. Finally, teachers monitor and assess the effectiveness and outcomes that relate to the implemented strategies and use them to amend their judgements if necessary (Van Geel *et al.*, 2016).

3.10. Factors influencing the monitoring of student progress and development

The literature on student progress monitoring highlights a complex interplay of factors that can both support and constrain effective practice. On the one hand, datafication has been associated

with unintended negative consequences, including increased workload and tensions and disruptions to teachers' professional practice (Daliri-Ngametua and Hardy, 2022; Moraiti, Bergviken Rensfeldt and Lundin, 2025). On the other hand, the effective use of student monitoring data is shaped by teachers' attitudes, their data literacy, and the organisational conditions within schools, including cultures of collaboration and access to meaningful data (Datnow and Hubbard, 2016; Hoogland *et al.*, 2016; Keuning, Van Geel and Visscher, 2017). Research further demonstrates that teachers are more likely to engage productively with data when they perceive it as a valuable resource for improving instruction and professional practice (Mandinach and Schildkamp, 2021). However, persistent challenges remain, including limited access to diverse data sources, superficial engagement with assessment data, and difficulties in translating data into actionable instructional strategies (Farrell and Marsh, 2016; Mandinach and Schildkamp, 2021).

3.10.1. Barriers to the effective use of student monitoring data

Educational data only becomes meaningful when teachers possess the requisite data literacy and analytical capacity required to interpret and apply it effectively (Fjørtoft and Lai, 2021; Lai, Fjørtoft and Li, 2025). Evidence from a professional development study targeting Dutch second and third grade teachers illustrated how the results from standardised achievement tests were used to implement a professional development programme that focused on changing teacher behaviour and classroom practice through the implementation of goal setting, data use and several instructional strategies (Van Kuijk, Deunk and Ritzema, 2017). Dutch performance monitoring systems allow users to process test results and automatically generate general overviews of performance on the level of the student, the classroom and the school (Van Kuijk, Deunk and Ritzema, 2017). Yet research indicates that the potential which is embedded in the application of such systems is currently underutilised (Van Kuijk, Deunk and Ritzema, 2017). Furthermore, the outputs of these systems are frequently misinterpreted by its users. The

findings of this study concur with results from outside the Netherlands, where school staff members frequently lack the knowledge and skills that are needed to interpret and use data to improve the quality of education (Van Kuijk, Deunk and Ritzema, 2017). The Dutch focus on a data-driven approach implies that performance goals are mainly interpreted in terms of results on standardised tests. Other types of 'soft' data, like informal classroom observation and students' daily work, can provide teachers with valuable information about students' progress as well, but 'hard' assessment data is seen as key to the data-driven approach (Van Kuijk, Deunk and Ritzema, 2017).

3.10.2. Factors that support effective use of student monitoring data

The effective use of student monitoring data in post-primary schools relies on a multi-dimensional interplay of organisational, user-level, and cultural factors rather than simply the presence of data itself (Schildkamp *et al.*, 2017). Research suggests that enabling conditions, such as targeted professional development, clear goal-setting practices, and supportive leadership, can strengthen the effective use of data in monitoring student progress (Mandinach and Schildkamp, 2021). If clear and measurable objectives for student performance are established, teachers are able to tailor their instruction more effectively. Setting specific goals directs attention toward achieving desired outcomes. As a result, this focused, goal-driven teaching is believed to enhance student performance (Van Kuijk, Deunk and Ritzema, 2017). The proposed positive connection between setting goals and improved outcomes is supported by goal-setting theory, which highlights such links, especially when goals are set at challenging levels (Locke and Latham, 2006).

Similar findings emerge from the literature on school effectiveness and teacher expectations, which demonstrates that high achievement expectations are associated with improved student outcomes (Van Kuijk, Deunk and Ritzema, 2017). Establishing clear performance goals enables more accurate monitoring of student progress and facilitates evaluation of whether

learners are making sufficient progress towards these goals (Van Kuijk, Deunk and Ritzema, 2017). The use of student performance data to adapt teaching practices to meet students' needs is known as formative assessment (Van Kuijk, Deunk and Ritzema, 2017). Research further indicates that the most effective teacher professional development programmes are those that focus both on how students learn as well as on how to track student learning (Van Kuijk, Deunk and Ritzema, 2017). Such professional development programmes should support the growth of skills to use and analyse the output of performance monitoring systems, and in addition, have such sufficient levels of curricular and pedagogical content knowledge to be able to integrate the results of their data-analysis into their teaching (Van Kuijk, Deunk and Ritzema, 2017).

3.10.3. The role of school leadership in supporting data use

Aiming to support school improvement, school leaders are tasked with supporting schools in using student data (Wayman, Shaw and Cho, 2017). In this regard, leaders face a wide menu of choices involving where and how to invest their efforts. For instance, principals might promote common understandings of data, support professional development and collaboration involving data, or improve teachers' access to appropriate data (Wayman, Shaw and Cho, 2017). Although it is reasonable to expect such interventions to support teachers and improve student outcomes, research has not been successful in establishing such links (Wayman, Shaw and Cho, 2017).

Scholarly literature exploring principals' data use tends to describe strategies principals use in order to support teacher data use rather than describe their own use of data (Drake, 2021). This gap in the research seems particularly significant given the important contribution of principals in influencing student achievement and the changing nature of their role which includes a redefinition of what effective principals should know and be able to do with respect to data use (Drake, 2021). For instance, revised principal leadership standards and evaluation tools define and assess competencies associated with school leaders' use of appropriate and relevant data

to develop and promote a school's vision, monitor student progress, and improve instruction and school performance (National Policy Board for Education Administration, 2015). Furthermore, both pre-service and in-service training teach principals about data use strategies and processes while large-scale investment in data systems and tools now offer principals more direct and immediate access to data on teachers and students (Drake, 2021).

A growing body of literature demonstrates that principals' data use activities may encourage or inhibit teachers' data use (Reeves, Summers and Grove, 2016; Stump, Zlatkin-Troitschanskaia and Mater, 2016; Schildkamp *et al.*, 2017; van Geel, Visscher and Teunis, 2017; Schelling and Rubenstein, 2021; Barry *et al.*, 2022). Certainly, principals' work now includes supporting teachers' data use (van den Boom-Muilenburg *et al.*, 2023; Drake, 2024). Principals serve as role models, guiding teachers' attitudes toward the usefulness of test results (Schildkamp, 2019; Abrams, Varier and Mehdi, 2021; Jimerson *et al.*, 2021; Schelling and Rubenstein, 2021). Principals have the capacity to create a supportive school culture including a shared vision, trusting relationships, and expectations and norms along with coherent and transparent rules related to data use (Keuning, Van Geel and Visscher, 2017; Schildkamp and Datnow, 2022; Drake, 2024; Lee, Camburn and Sebastian, 2025). Principals also model effective data use practices (Schildkamp and Poortman, 2015), structure opportunities for teachers to use data (Marsh, Bertrand and Huguet, 2015), providing training, assistance and professional development (Datnow and Hubbard, 2016) and develop and facilitate school expertise through distributed leadership and teacher teams (O'Rourke and O'Brien, 2026). Yet the relationship between principals and teachers regarding data is still not well understood (Hawlitschek *et al.*, 2024). Previous research predominantly focused on small-scale qualitative designs (Schildkamp, 2019; Abrams, Varier and Mehdi, 2021; Schelling and Rubenstein, 2021) or the use of questionnaire data from a single perspective resulting in heterogeneous effect sizes

ranging from null to large effects (Reeves, Summers and Grove, 2016; Stump, Zlatkin-Troitschanskaia and Mater, 2016; Schildkamp *et al.*, 2017).

Yet analysing principal's use of data systems is arguably more complex than it is for teachers, as principals do not often engage in actions that directly influence student performance outcomes (Grissom, Egalite and Lindsay, 2021). Though it is obvious that high-stakes accountability pressure, state and national standards, and evaluation tools and rubrics have created conditions under which principals are required to use data in order to inform their instructional and human capital decision-making (National Policy Board for Education Administration, 2015), it is less obvious how they use data in practice (Drake, 2021). The literature indicates that principals are more often found in the role of supporting teachers in using data than in using it themselves, though there are examples of principals using both student and teacher data to inform their decision-making (Drake, 2021). While some principals use student achievement data primarily for accountability purposes (Drake, 2024), research also indicates that principals most often use it for diagnostic purposes, support, and intervention for students and teachers (Gannon-Slater *et al.*, 2017; Young *et al.*, 2018; Hackmann, Malin and Ahn, 2019; Goffin, Janssen and Vanhoof, 2022). Principals also use student achievement data when hiring teachers (Cannata *et al.*, 2017), assigning teachers to classes (Park *et al.*, 2017), designing professional development and conducting formal evaluations (Drake, 2024). Furthermore, principal's use of data warehouse systems seems to be influenced by the school calendar and the release of student and teacher data (Drake, 2021).

3.11. Conclusion

This chapter has critically examined the literature relating to the monitoring of students' progress and holistic development within contemporary education systems. It has highlighted how increasing demands for accountability, alongside rapid technological advancements, have contributed to the growing centrality of data use in education (Drake, 2024). The review

established a clear conceptual foundation by defining key terms and exploring the theoretical underpinnings of monitoring, assessment, and data use. It then examined a range of systems and tools used to monitor student progress, from large-scale international assessments to school-level practices and digital monitoring systems. In doing so, the literature demonstrates that monitoring is a multi-layered and complex process shaped by policy priorities, technological capacity, and organisational practices (Savage and Bentley, 2017; Braun and Singer, 2019)

A central theme within the literature is the growing reliance on data to inform decision-making. While data-informed practices show potential to improve outcomes, evidence remains inconsistent and dependent on factors such as leadership, data literacy, and school culture (Van Geel *et al.*, 2016; Mandinach and Schildkamp, 2021). School leadership is particularly significant in shaping how data is used in practice (Drake, 2021). The literature also highlights the importance of stakeholder engagement, though meaningful involvement of students and parents remains limited (Furey and Loftus-Rattan, 2022; Shi, 2025)

Finally, the chapter identifies ongoing tensions linked to the datafication of education, including concerns around surveillance, privacy, and the potential narrowing of educational experiences (Selwyn, 2015; Jarke and Breiter, 2019). The literature reviewed provides a comprehensive and critical foundation for this study. It highlights the complexity of monitoring student progress and development, the opportunities and challenges associated with data use, and the importance of context in shaping practice. Importantly, it identifies gaps in current research, particularly in relation to how monitoring systems are enacted at school level and how stakeholders are engaged in meaningful ways (Drake, 2021; Hawlitschek *et al.*, 2024).

Building on this foundation, the next chapter will outline the research methodology adopted in this study. It will detail the research design, data collection methods, and analytical approaches

used to investigate how monitoring systems are implemented and utilised in practice, and how they may be further developed to support student progress and holistic development.

Chapter Four: Methodology

4.1. Introduction

The aim of this study is to explore the systems used by school leaders to monitor student progress and development in post-primary schools in Ireland. Addressing this aim requires an approach capable of capturing the complexity of practices, interpretations and interactions within real-world school contexts. Accordingly, a qualitative research design was adopted to generate rich, contextually grounded insights into how progress monitoring is understood and enacted by practitioners. This chapter describes and justifies the methodology and research design of this study. The first section introduces the study's specific design, followed by a discussion of the background literature that shaped the research approach. This includes an exploration of the ontological, epistemological, axiological, and methodological considerations relevant to the research. The second section outlines the chosen research design and the measures taken to uphold ethical standards, credibility, and quality in addressing the research problem. It describes the data collection methods and then outlines the data analysis techniques utilised. Finally, a summary of the case and each site involved in the study is presented. In doing so, this chapter aims to supply the context for the processes that were involved in the research study as well as the foundation for its logic and its criteria.

4.1.1. Research design overview

This study sought to develop a comprehensive and nuanced understanding of the research problem, leading to the adoption of a qualitative case study method as the most suitable approach. A multi-site case study design was selected, involving an in-depth investigation across eight post-primary schools; each treated as a distinct case. Data were collected through semi-structured interviews, focus group interviews and document analysis including examination of relevant documents such as school policies and Whole School Evaluation-Management, Leadership and Learning inspection reports. Each site was initially analysed

individually, treating it as a separate data set, before employing a cross-site analytical framework to identify key themes. This two-stage approach facilitated an overarching interpretation that integrated both deductive and inductive analysis (Yin, 2018). The use of multiple data sources also facilitated methodological triangulation, strengthening the credibility and richness of the findings (Bowen, 2009). Overall, the multi-site case study design provides a robust framework for exploring how systems for monitoring student progress and development are implemented across diverse school settings, aligning closely with the study's exploratory aims.

4.1.2. Researcher positionality and the reflexive process

It is important to consider the role of the researcher when undertaking a research study. As a practicing post-primary principal, the researcher recognised the potential for bias throughout the research study. As a practitioner-researcher, she remained cognisant of the influence of her professional role including the assumptions, prior knowledge and perspectives it brings (Morrissey *et al.*, 2026). Positionality is often understood through the notion of the researcher as an 'insider', whereby the researcher shares common experiences, professional contexts or identities with participants (Morrissey *et al.*, 2026). In this study, the researcher's role positioned her as an insider, affording valuable contextual knowledge, professional credibility and deeper access to participants' perspectives. This facilitated rapport-building and supported the generation of rich, contextually informed data. This insider status supported the development of trust and encouraged participants to share detailed and nuanced accounts of their experiences (Mercer, 2007).

However, this proximity to the research context also introduced potential challenges, including the risk of taken-for-granted assumptions, selective interpretation of data and the possibility of over-identification with participants' perspectives (Berger, 2015). To address these challenges, the researcher engaged in a continuous process of critical reflexivity throughout the study. This

included maintaining reflective notes during data collection and analysis, questioning initial interpretations and consciously distinguishing between participants' perspectives and her own professional assumptions. In addition, efforts were made to ensure transparency in the analytical process, including clear documentation of coding decisions and the use of multiple data sources to corroborate findings. Through this reflexive approach, the study sought to balance the benefits of insider knowledge with the need for analytical rigour, credibility and transparency.

4.2. Methodological background

Before conducting research, it is important to clearly articulate the methodological foundations underpinning the research design. This ensures rigour and alignment with the research aims, methods and underlying philosophical foundations and assumptions. To create a reliable and valid research design, it is necessary to examine how the key elements of the research, philosophical stance, methodology and methods, are interconnected and to clearly articulate the philosophical worldview assumptions that inform the study (Creswell and Creswell, 2023).

4.2.1. Philosophical assumptions

All research studies have underlying 'philosophical foundations' (Hunt and Hansen, 2008, p. 2). In planning a study, researchers need to consider the philosophical worldview assumptions they bring to the research process, the research design that is related to this worldview, and the specific methods of research through which this worldview is operationalised (Creswell and Creswell, 2023). These assumptions are shaped by the researcher's disciplinary background, prior experiences and professional context (Creswell and Creswell, 2023). Sefotho (2015) emphasises the importance of clearly articulating ontological, epistemological and methodological positions to ensure coherence and consistency in research design. These assumptions reflect the beliefs and values that underpin the research process and shape how the research problem is understood and investigated (Creswell and Poth, 2023). In the context

of this study, the research is underpinned by a pragmatic orientation, motivated by a desire to generate insights that can inform practice and improve student outcomes in post-primary education.

Research paradigms are largely understood through their essential ontological and epistemological assumptions which reflect different understandings of reality and knowledge (Tang, 2011). Such ontological assumptions and resulting epistemological perspectives guide methodological considerations and the resulting choice of instrumentation, data collection methods and data analysis techniques (Thota, Berglund and Clear, 2012). Ontology is the study of being (Crotty, 1998). Ontological assumptions concern the nature of reality and what can be known about it (Scotland, 2012).

The main worldviews that are traditionally offered as being fundamentally opposed are those of positivism/postpositivism and constructivism/interpretivism (Morgan, 2007). With respect to ontological differences, positivists argue that there is a single reality and that this reality can be measured in a reliable and valid manner employing operational and standardised definitions, whereas interpretivists believe that there are multiple-constructed realities and multiple interpretations that are available from different researchers that are all equally valid (Onwuegbuzie and Leech, 2005).

Researchers need to take a position regarding their perceptions of how things really are and how things really work (Scotland, 2012). In this study, reality is understood as context-dependent and shaped by the experiences and perspectives of participants within school environments. Qualitative research is situated in natural settings and attempts to interpret phenomena in terms of the meanings people ascribe to them (Denzin and Lincoln, 2018). Accordingly, knowledge is generated through the exploration of participants' perspectives and experiences (Creswell and Poth, 2023). This is particularly appropriate for the present study,

which seeks to understand how school leaders and teachers perceive and implement systems for monitoring student progress and development.

Axiological assumptions relate to the values and ethics that are evident in the study (Creswell and Poth, 2023). Positivists argue that research should be value-free, whereas interpretivists believe that research is influenced by the values of the researcher (Onwuegbuzie and Leech, 2005). In this study, the researcher acknowledges that values are inherent in the research process, particularly given her professional background, and adopts a reflexive stance to ensure transparency.

Epistemology relates to the nature and forms of knowledge (Cohen, Manion and Morrison, 2018). Epistemological assumptions concern how knowledge is generated, understood and communicated (Scotland, 2012). Positivists argue that the researcher and the object of study are independent and researchers should therefore remain objective in studying phenomena. Whereas, interpretivists contend that they are interdependent and that knowledge is co-constructed through interaction between researcher and participants (Onwuegbuzie and Leech, 2005). This study adopts an interpretivist epistemological stance, recognising that understanding is developed through engagement with participants' experiences, while maintaining a pragmatic orientation to ensure the findings remain relevant and applicable to practice.

4.3. Methodological approaches

Research in education is commonly understood through qualitative and quantitative approaches, each underpinned by different assumptions about knowledge and reality (Sefotho, 2015). While often contrasted, these approaches may also be viewed as complementary within pragmatic frameworks (Castellan, 2010). It is therefore important to consider their suitability in relation to the research aims. In this study, three approaches were reviewed, with a qualitative

approach ultimately selected as the most appropriate for exploring complex, context-dependent practices.

4.3.1. Quantitative research methods

Quantitative research focuses on the collection and analysis of numerical data to identify relationships between variables and to test theories using statistical techniques (Castellan, 2010; Almeida, Faria and Queirós, 2017). Its strengths lie in its structured and systematic approach, enabling the generation of findings that may be generalisable to wider populations (Borrego, Douglas and Amelink, 2009). The capacity for generalisation is often cited as a key advantage for quantitative designs (Xiong, 2022). However, these strengths are accompanied by limitations (Dudwick *et al.*, 2006; Choy, 2014) that are particularly relevant to this study.

Quantitative approaches are typically associated with a positive paradigm, which emphasises objectivity and detachment. As a result, they may not adequately capture the complexity, meaning and context of social phenomena (Tuli, 2010; Xiong, 2022). This detachment can provide limited insight into participants' lived experiences and the meaning they attach to their practices (Carr, 1994). A further limitation is its reduced capacity to explore deeply contextual and interpretive aspects of educational practice, particularly those related to beliefs, perceptions and organisational processes. This is particularly important in educational research studies where quantitative research methodologies cannot fully identify and analyse the 'deep meanings' and richness of the human experience of learning and teaching (Jones, 2000, p. 160).

Such limitations are especially significant in studies, like the present one, that aim to understand complex, context-dependent practices such as the monitoring of student progress in schools. For these reasons, while quantitative methods offer valuable breadth, they are less suited to addressing the exploratory and interpretive aims of this research. Accordingly, a qualitative approach was deemed more appropriate to capture the depth, nuance, and contextual

complexity required to understand how school leaders and teachers engage with progress monitoring systems.

4.3.2. Qualitative research methods

An alternative to the post-positivist worldview developed in the form of qualitative research methods during the late twentieth century (Creswell and Creswell, 2023). Qualitative research functions within its unique philosophical assumptions, which must be understood to allow an analysis of the benefits and limitations of the method. It is concerned with aspects of existence that cannot be quantified, focusing on the interpretation and explanation of the dynamics of social relations and the deepening of understanding of a given problem (Almeida, Faria and Queirós, 2017).

A qualitative approach is generally based on an idiographic interpretative theoretical perspective which emphasises subjective experiences and the meanings they have for the individual (Rebolj, 2013). Hence, the subjective views of the researcher on circumstances play a vital role in the study results. Indeed, the researcher is both the subject and the object of the study (Almeida, Faria and Queirós, 2017). Denzin and Lincon (2018) note that a qualitative approach relies on an interpretive, naturalistic approach to the world which attempts to make sense of phenomena in terms of the meanings people bring to them. Creswell and Poth (2023) give further emphasis to the design of research and the use of distinct approaches to enquiry when they note that the data analysis in qualitative research is both inductive and deductive and establishes patterns or themes. The final written report includes the voices of participants, the reflexivity of the researcher, an intricate description and interpretation of the research problem, and its contribution to the literature or a call for change (Creswell and Poth, 2023).

It is useful to move from a more general definition to specific characteristics found in qualitative research and identified in this research study. Qualitative researchers generally collected data at the site where the participants experience the problem under study (Creswell

and Poth, 2023). Researcher's reflexivity recognises their positionality and how it influences the research process and informs their interpretation of data in the study, and what they have to gain from the study (Creswell and Poth, 2023). In saying that, the qualitative researcher keeps a focus on learning the meaning that the participants hold about the research problem, not the meaning that the researcher brings to the research or writers from the literature (Creswell and Poth, 2023).

Qualitative researchers gather multiple forms of data themselves through examining documents, observing behaviour and interviewing participants (Creswell and Poth, 2023). Semi-structured interviews and focus group interviews were selected as the most suitable method for this investigation in order to ask probing, open-ended questions to explore the participants' experiences and viewpoints (Yin, 2018). Qualitative researchers use complex reasoning skills through the process of inductive and deductive logic to build patterns, categories and themes that are constantly being checked against the data (Creswell and Poth, 2023).

While a significant benefit of qualitative research surrounds the fact that it can facilitate a deeper understanding of a problem under analysis, its limitations lie in the fact that it can be time-consuming and therefore can be difficult to study a large population (Denscombe, 2021). Furthermore, the procedures are not standardised and there may be issues with attempting to sort and reduce data (Castellan, 2010). Bryman (2016) highlights that qualitative research is often criticised for issues related to subjectivity, replication, and generalisability. In educational settings, challenges in data collection can vary significantly. When selecting a research methodology, researchers must take several factors into account, including the field of study, their role in the research, the project timeline, budget constraints, and the specific research question.

4.3.3. Mixed methods

Mixed methods research has been heralded as a response to the debates discussing the advantages and disadvantages of quantitative versus qualitative research methods (Feilzer, 2010). Advocates of mixed methods research strive for an integration of quantitative and qualitative research strategies. The approach most commonly related to mixed methods research is pragmatism as it offers an alternative worldview to those of positivism/postpositivism and constructivism and focuses on the problem to be researched and the consequences of the research (Feilzer, 2010). While mixed methods can offer complementary insights, it was not adopted in this study, as the research aims prioritise depth of understanding over breadth or measurement.

4.3.4. Summary

Overall, while quantitative, qualitative and mixed methods approaches each offer distinct strengths (Almeida, Faria and Queirós, 2017; Taherdoost, 2022), the qualitative approach was deemed most appropriate for this study. This is because the research seeks to explore complex, context-dependent practices and participants' experiences within natural school settings. The qualitative approach therefore provides the most suitable framework for addressing the research questions and achieving the study's aims.

4.4. Research design utilised in this study

The research approach used in this study is dominated by an interpretivist worldview and utilises a qualitative multi-site case study approach. This research aims to explore eight case study examples of the use of data collected for the purpose of monitoring students' progress and development in post-primary schools in Ireland. This research is approached from a pragmatic perspective where a problem-solving orientation, contextual understanding, and a focus on utility and impact are at the forefront of consideration. This position is outlined in the coming section in order to illustrate the study's rigour and credibility.

4.4.1. Philosophical perspective in this research

This study is positioned within the pragmatic paradigm. Pragmatism bypasses the contentious issues of truth and reality, accepting philosophically that there are singular and multiple realities that are open to empirical enquiry and positions itself toward solving practical problem in the 'real world' (Feilzer, 2010). Positioning oneself as a pragmatic researcher affords a myriad of advantages for investigators (Onwuegbuzie and Leech, 2005). For example, it allows researchers to be flexible in chosen techniques in order to address a range of research questions. (Onwuegbuzie and Leech, 2005). While the paradigm of pragmatism is often linked to mixed method research, it does not require a particular method or method mix and does not exclude others (Feilzer, 2010).

To achieve the aim of exploring the systems used to monitor student progress and development, this study employs a qualitative case study research methodology based on semi-structured interviews and focus group interviews. While this study is primarily pragmatic, it draws on interpretivist elements since it seeks to understand how school leaders and teachers perceive and implement progress monitoring systems. As the researcher intended to analyse the participants' subjective and complex views on the systems used to monitor student progress and development, this research is situated in an interpretivist paradigm and is hence underpinned by the view that lived experience is subjective and is created through interactions in social contexts (Bhattacherjee, 2019). While interpretivism informs the study's qualitative, meaning-oriented approach by emphasising participants' lived experiences, pragmatism ensures the research remains grounded in practical relevance, supporting its application to school leadership and data-informed decision-making. Data were analysed via thematic analysis.

4.4.2. Pragmatism in educational research

While research is typically grounded in ontological and epistemological assumptions that shape and guide the research process, pragmatism does not fit neatly into either category. Instead, it is best understood as a methodological approach. For researchers who adopt a linear or purist perspective, pragmatism is often seen as occupying a middle ground between positivism and constructivism (King, 2022). Since pragmatism is regarded more as a methodology than an epistemology, it allows for both qualitative and quantitative methods, prioritising actionable enquiry over a strict commitment to either a singular objective reality or multiple subjective realities (Feilzer, 2010). This practical focus makes pragmatism particularly valuable in educational research, as it moves beyond the traditional view that epistemology dictates methods (Johnson, Onwuegbuzie and Turner, 2007). In this paradigm, the pursuit of absolute truth or flawless logic is secondary to the practical application of research findings (King, 2022).

4.4.3. Methodological approach utilised in this research

While the benefits and limitations of quantitative research methods are often contrasted with those of qualitative research methods, the reality is that the choice of research method must be influenced by the research questions (Borrego, Douglas and Amelink, 2009). Indeed, Geertz (1974) notes that there are four interdependent considerations to take into account when conducting research: the paradigmatic assumptions one possesses, the perceived nature of the phenomenon to be explored, the questions to be asked about it, and the methodology to be used. Research paradigms are a way to explore selected world phenomena; hence their choice must serve that phenomenon chosen for study. Based on the philosophical assumptions, primary aims, and research questions, a multi-site case study approach is the most suitable approach to carefully achieving the research objectives. Since the research aims to explore the systems used

by school leaders to monitor student progress and development, a qualitative approach to gathering data is argued to be the most suitable means of addressing the research questions.

4.4.4. Case study and multi-site case study

Crowe *et al.* (2011, p. 1) argue that the case study approach is especially useful when there is a need to 'obtain an in-depth appreciation of an issue, event or phenomenon of interest, in its natural real-life context'. Qualitative case study methodology offers tools for researchers to study complex phenomena within their contexts using a variety of data sources (Baxter and Jack, 2010). The multi-site case study approach is a valuable method to develop theory, evaluate systems and develop further processes that will be useful in monitoring student progress and development. The case study methodology facilitates the exploration of individuals or organisations, interventions, relationships, communities or programmes (Yin, 2018). This case study methodology is exploratory in nature as it is used to explore situations in which the intervention being evaluated has no clear, single set of outcomes (Yin, 2018).

There are several basic key elements to the design and implementation of a case study methodology that can be utilised to contribute to the overall quality and trustworthiness of the study (Baxter and Jack, 2010). In adopting this approach, the novice researcher must ensure that (a) the case study research question is clearly articulated, supported by propositions where appropriate and well-justified; (b) the case study design aligns with the research question; (c) appropriate purposeful sampling strategies are utilised; (d) data are collected and managed in a systematic manner; and (e) the data are analysed accurately (Baxter and Jack, 2010).

The use of a multi-site case study design is particularly appropriate for this research as it enables the exploration of the phenomenon across multiple school contexts, rather than within a single bounded setting. Given the diversity of post-primary schools in Ireland in terms of size, demographic profile and organisational practices, the inclusion of multiple sites facilitates the identification of both common patterns and important contextual differences in how

systems for monitoring student progress and development are implemented. This approach strengthens the analytical depth of the study through cross-case comparison, allowing for a more robust interpretation of findings (Yin, 2018).

4.4.5. Case protocol

According to Yin (2018), a case study protocol plays a crucial role in structuring the case study approach, particularly in research involving multiple sites. The following table presents an overview of the case study protocol that forms the foundation of this study.

TABLE 1. CASE STUDY GUIDING PROTOCOL

Guiding research questions	What systems are in place for monitoring of students' progress and development in schools? How are schools using the data collected?
Guiding theoretical framework	Develop tentative explanations from progress monitoring literature, Irish post-primary literature.
Collect data	Recruit schools and collect qualitative data
Analyse evidence 1	Deductive within-site analysis (Bingham, 2023)
Product 1	Individual site reports explaining systems in place to monitor student progress and development and how schools are using the data collected
Analyse evidence 2	Inductive cross-site analysis
Product 2	Evidence informed themes applicable at the level of the case

4.4.6. Site selection

In case study research, it is important that cases are clearly defined and bound (Yin, 2018). For the purpose of this study, the bounded system is the Irish post-primary school context. Due to the nature of the research questions, it was decided that multiple sites would be necessary for this research to yield rich data. While all sites are post-primary schools located in Ireland, there were variations in size, location, demographics and degree of engagement with monitoring of

student progress and development. The participants of this study are principals/deputy principals and teachers from eight separate post-primary schools in Ireland. Some of the teachers have formal leadership roles (assistant principal) related to academic monitoring, year head, and DEIS co-ordinator roles. They reflect on their experience of using systems to monitor the progress and development of the students in their school. The criteria for selecting schools were that they self-identify as having systems in place to monitor student progress and development. As this is an exploratory study of the phenomenon and given that there is no research carried out in Irish schools on what these systems might involve, it is not useful to identify more specific criteria at this time.

The selection of sites involved an initial invitation process. An invitation through the National Association of Principals and Deputy Principals Network outlined the purpose of the study and the participation requirements. Schools that expressed interest and met the inclusion criteria of having established systems for monitoring student progress and development were considered for inclusion. From those who responded positively, eight schools were selected based on their willingness to participate, their accessibility and their ability to provide varied perspectives in terms of school context and practices. This process reflects a combination of purposive and convenience sampling, aligning with the study's exploratory qualitative design. The purposeful nature of this research aligns with a central principle of qualitative methodologies, as Tajik, Golzar and Noor (2024, p. 1) suggest that purposive sampling has emerged as a cornerstone in qualitative research 'due to its ability to provide rich, context-specific insights'.

The inclusion of a diverse range of school types was a deliberate feature of the research design. While all participating schools met the inclusion criterion of having systems in place to monitor student progress and development, variation was sought in relation to school context, including DEIS and non-DEIs status, school ethos, location and student demographics. This diversity was intended to explore where approaches to monitoring student progress and development

differed according to school context. While the findings revealed many similarities across the sites, some contextual differences emerged. In particular, DEIS schools demonstrated a stronger emphasis on monitoring attendance, attainment and retention within the framework of DEIS planning, while the fee-paying school displayed a particularly developed approach to academic monitoring. The inclusion of diverse school contexts therefore strengthened the study by facilitating cross-case comparison and enabling consideration of the extent to which findings were shaped by context.

4.4.7. Multi-site case study overview

An overview of the post-primary schools involved in the research is presented in this section. All schools met the selection criteria in that they were all Irish post-primary schools who used systems to monitor student progress and development. This meant that the schools share several significant characteristics. For example, all eight schools operate under the direction of the Department of Education and Youth, all schools are mainstream schools for post-primary aged students, and all schools utilise the same curriculum. Correspondingly, the schools have many differences including location, size and enrolment numbers, demographic constitution, school ethos and patron, the number and composition of staff and the community in which they operate. These differences were considered important as they provided an opportunity to examine whether monitoring practices were influenced by school context and to identify common patterns and context-specific variations across the case sites. All schools and participants were given pseudonyms to protect anonymity. A profile of the sites within the case is provided in table 2 and an overview of the case is provided in table 3. The data collection process took between one and two days in each research site but involved several weeks of interaction with each school. Prior to site visits, school policy documents were gathered via email from school principals and the researcher gathered WSE-MLL inspection reports from

the Department of Education and Youth website. Data was then collected during site visits and via Zoom at the convenience of the school principal and the research participants.

TABLE 2. OVERVIEW OF SITES

Site (n=8)	School location	School ethos	Student enrolment	Participants
Research Site 1 (RS1)	Urban	Catholic	930	(4) Principal; Assistant principal 1; 2 Teachers
Research Site 2 (RS2)	Rural	Inter-denominational	628	(5) Principal; Deputy Principal; 3 Teachers
Research Site 3 (RS3)	Urban	Catholic	1004	(4) Principal; Assistant principal 1; 2 Teachers
Research Site 4 (RS4)	Rural	Catholic	681	(4) Principal; Assistant principal 2; 2 Teachers
Research Site 5 (RS5)	Urban	Inter-denominational	805	(6) Principal; Assistant principal 2; Assistant principal 2; 3 Teachers
Research Site 6 (RS6)	Urban	Inter-denominational	1353	(5) Principal; Assistant principal 1; Deputy Principal; 2 Teachers
Research Site 7 (RS7)	Urban	Catholic	601	(5) Principal; Assistant principal 1; 3 Teachers
Research Site 8 (RS8)	Rural	Multi-denominational	672	(4) Deputy Principal; Assistant principal 1; 2 Teachers

To provide a consolidated overview of the case, table 3 summarises the key characteristics of the participating schools and the composition of the research sample. This overview situates

the scale and scope of the study, outlining the number of schools and participants involved. Presenting this information supports transparency in relation to the dataset and provides a foundation for understanding how the findings reflect views of both school leadership and teacher leadership across multiple sites.

TABLE 3. OVERVIEW OF CASE

Category	Total
Total number of schools	8
Total number of students in the schools	6,674
Total number of teachers in the schools	551
Total number of SNAs in the schools	66
Total number of participants	37
Total number of principals	7
Total number of deputy principals	3
Total number of assistant principals	8
Total number of teacher participants	19

The case comprises eight post-primary schools with a combined enrolment of 6,674 students, providing a substantial and diverse context for exploring practices of student progress monitoring. A total of 37 participants contributed to the study, including 7 principals, 3 deputy principals, 8 assistant principals and 19 teachers, ensuring representation of both strategic and classroom-level perspectives. This balance supports the study's aim of examining how systems for monitoring student progress and development are both designed and enacted across school contexts, allowing for the integration of leadership decision-making processes with teachers' lived experiences. As such, the composition of the sample strengthens the credibility of the findings by facilitating rich within-site insights and meaningful cross-site comparison.

4.5. Data collection methods for each site

To ensure the development of a high-quality dataset capable of supporting the study's aims, a range of data collection methods to be implemented across each site were carefully considered.

Case study research does not prescribe specific techniques for data collection or analysis; rather, methodological choices should be guided by the overarching objectives of the research (Merriam, 1998). In this study, the research questions are ultimately designed to explore the processes, experiences and contextual factors shaping progress monitoring in post-primary schools, thereby necessitating the use of multiple, complementary methods of data collection to capture both the breadth and richness of insight. The specific sources of data collected for each site included interview data, focus group data and data from relevant documents including school policy documents and externally compiled evaluation reports. The data collection plan and sources are indicated in the following table.

TABLE 4. DATA TYPE AND SOURCES FOR EACH SITE

Data type	Source
Interview	Principal/deputy principal
Interview	Deputy principal/Assistant principal with responsibility for progress monitoring
Focus group	Teachers
Document	Relevant policy documents e.g. Assessment Policy, Additional Educational Needs Policy, Homework Policy and externally compiled school inspection reports

4.5.1. Recruitment

Following the successful completion of the ethical approval process, participant recruitment was undertaken. The eight schools were identified as a result of purposive and convenience sampling. Purposive sampling is described as a sample that satisfies the specific needs of the project (Robson and McCartan, 2017). The inclusion criterion stipulated that participants must have experience in monitoring student progress and development within post-primary schools. This criterion was applied to ensure that participants could provide informed insights into the

phenomenon under investigation. Convenience sampling refers to choosing the most convenient respondents (Robson and McCartan, 2017). In this case, the convenience element relates to the researcher's membership of the National Association of Principals and Deputy Principal (NAPD) in Ireland and to the geographical location of potential participants, since the researcher works full time and was not necessarily in a position to travel nationally. Access to the participants was therefore sought through the NAPD. Permission was requested from the Director of the NAPD to circulate an invitation to participate in the study through the organisation's professional network (Appendix A).

Following this, participating schools were recruited via an advertisement in 'Your NAPD End of the Week Update - 21st March 2025' which was emailed to all NAPD members (Appendix B). Schools were invited to participate on the basis that they met the inclusion criteria and were interested in contributing to the study. Those who expressed interest contacted the researcher directly. Letters were then sent to the principals of the schools that had expressed interest in participating in the study, outlining the purpose of the study, the proposed activities in the school, the importance of anonymity and confidentiality, and the voluntary nature of participation in the study (Appendix C). From these responses, schools were selected on a first response and availability basis, while also seeking to ensure some variation in school context where possible. Once agreement to participate had been reached with the principal, through phone and email contact, each school identified participants that would add value to the research through their involvement. Each school was asked to provide an interview with the school principal or deputy principal, the teacher leader with a particular interest or responsibility for the monitoring of student progress and development and a focus group of teachers. Recruiting participants for qualitative research often presents common challenges. The literature emphasises the importance of researchers remaining adaptable, creative, and determined in the face of their difficulties, and of employing recruitment strategies that are

specifically designed to meet the needs of the target population (Perez *et al.*, 2022). Recruitment continued until eight schools had been successfully secured for inclusion in the study.

4.5.2. Interview and focus groups

Evidence concerning monitoring student progress and development in schools was collected from semi-structured interviews with principals/deputy principals, assistant principals, and focus groups with teachers. Qualitative interviews and focus group interviews are designed to produce rich narrative data that allows the researcher to elicit information, experiences, feelings, opinions and attitudes of participants (Mcdermid *et al.*, 2014). The interviews and focus groups were semi-structured with a series of key questions (Kvale, 2007). Participants' answers to these questions then become a source of data (Denscombe, 2021). Important preparation was undertaken to ensure that each participant felt at ease during the interview. This facilitates a less formal conversation where both parties interact as comparative equals (Pepper and Wildy, 2009).

The inclusion of multiple sources allowed for rich insights and facilitated the comparison and corroboration of perspectives and experiences in each site. The rationale for using interviews with principals was due to their significance in the literature in relation to data use in schools (Drake, 2024; Karimov *et al.*, 2024). While the primary focus of this research is on school leadership and the systems established by school leaders to monitor student progress and development, it was important to move beyond the perspectives of principals alone. Irish educational policy positions leadership as a distributed practice, shared across principals, deputy principals, assistant principals and teachers who undertake responsibilities (Department of Education, 2022a). Consequently, assistant principals were included in the interviews because they often hold responsibility for areas directly related to student monitoring, including assessment, student support, wellbeing, attendance, SEN provision and DEIS planning. Their

inclusion offered insight into how leadership responsibilities associated with progress monitoring are enacted in practice across different organisational levels.

Teachers were included through focus groups, not as a separate focus of enquiry, but as key informants who could provide evidence of how leadership expectations were understood and enacted at classroom level. Their perspectives provided an important means of examining the extent to which school leaders' descriptions of practice were reflected in the lived experiences of those responsible for implementing these processes and whether leadership expectations had become embedded within everyday professional practice. In this respect, teacher perspectives served as an important form of triangulation, enabling the researcher to compare school leaders' accounts of intended practice with teachers' accounts of enacted practice. Across the eight research sites, focus group dynamics were characterised by a high degree of professional collaboration and mutual reinforcement, though notable points of nuance and occasional disagreement emerged regarding the interpretation and implementation of monitoring systems.

Focus group interviews is a method that is particularly useful for studying participants' knowledge and experiences and, Kitzinger (1995, p. 299) argues, 'can be used to examine not only what people think but how they think and why they think that way'. The rationale for using focus groups as a means of gathering data from teachers was so that the voice of the teacher could be heard in this study, allowing wider perspectives and a stronger insight into how monitoring of student progress and development was enacted at each site. Secondly, it was important to capture a group perspective as focus group discussion can 'facilitate the expression of ideas and experiences that might be left underdeveloped in an interview and to illuminate the research participants' perspectives through the debate within the group' (Kitzinger, 1995, p. 302). Teachers were invited to participate in the focus groups by their principals on the basis of their familiarity with the school's processes for monitoring student progress and development and their direct involvement in implementing these practices. The focus groups

typically comprised teachers and assistant principals who built upon one another's insights, often using their specific roles to provide a multi-layered view of student monitoring. Although focus groups generally include more participants (e.g. 6-10), it is acknowledged in the literature that smaller groups can still be valid; for example, focus groups have been conducted with as few as two participants when attendance is limited (Tsindos, 2023). The use of small focus groups enabled discussion of shared practices and allowed participants to compare experiences and collectively reflect on how monitoring processes operated in practice. In some sites, due to teachers' workloads and the busyness of school life, only two teachers were available to take part in the focus group interviews. Hence, it was necessary for the researcher to be reflexive to the needs of the participating schools. The researcher was cognisant of Crowe et al.'s (2011, p. 6) caution that data sources from different cases should be broadly comparable 'even though they may vary in nature and depth'. Ultimately, the aim was to develop a comprehensive understanding of how student progress and development were monitored across each site. This was achieved by including a stratified sample of participants at every location and by complementing this with additional documentary analysis to strengthen the evidence base (Bowen, 2009).

It has been argued that preparation for a qualitative interview is debatably as significant, if not more significant, than the interview itself (Lawrence, 2022). A summary of the proposed questions, all of which had been carefully phrased, had been sent to both the interview (Appendix D) and focus group (Appendix E) participants beforehand. This was accompanied by along with a Plain Language Statement (Appendix F) and an Informed Consent form (Appendix G) which explained the ethical considerations involved the research project. The researcher recorded the interviews directly onto a laptop computer using the dictate function on Microsoft Word or via Zoom. The interviews were also recorded using the Voice Memo

function on the researcher's iPhone. Interview and focus group data collected at each site is presented in table 5 below.

TABLE 5. DATA GATHERED THROUGH INTERVIEW AND FOCUS GROUP AT EACH SITE

School	Data source 1	Data source 2	Data source 3
RS1	Principal	Assistant principal 1	Focus group – 2 teachers
RS2	Principal	Deputy principal	Focus group – 3 teachers
RS3	Principal	Assistant principal 1	Focus group – 2 teachers
RS4	Principal	Assistant principal 2	Focus group – 2 teachers
RS5	Principal	Assistant principal 2	Focus group – 3 teachers
RS6	Principal	Assistant principal 1	Focus group – 2 teachers and deputy principal
RS7	Principal	Assistant principal 1	Focus group – 3 teachers
RS8	Deputy principal	Assistant principal 1	Focus group – 2 teachers

4.5.3. Interview and focus group schedule development

In the development of the interview and focus group schedule, the researcher was guided by the case study protocol (Yin, 2018) which was itself informed by the research questions, the literature review and the theoretical framework. This facilitated the development of relevant topics to be explored which formed the basis of questions that would provide insight in relation to the research objectives. Considerations emerging from the literature review formed the focus of the questions for the semi-structured interviews. Semi-structured interview questions were

developed and amended as a result of feedback from the pilot interview. Table 6 below provides an example of the stated approach.

TABLE 6. INTERVIEW AND FOCUS GROUP PROTOCOL DEVELOPMENT

Research question	What systems are in place for monitoring of students' progress and development in schools?	How are school leaders using the data collected?
Broad topic	Monitoring of student progress and development at the site	Data-informed decision-making
Sample researcher question	What does the monitoring of student progress and development look like in this school?	Influence of data-informed decision-making at this site
Sample participant questions	What are the primary goals of monitoring student progress in your school context? How does your school balance the focus on academic progress with holistic student development (social, moral, and personal growth)?	How is student performance data used in your school to make instructional decisions? Can you provide an example of a significant decision made based on student data? What steps do you take to ensure data-informed decision-making improves student outcomes?

Protocols were adapted depending on whether they were guiding the principal interview, the assistant principal interview, or the focus group with teachers.

4.5.4. Document analysis

As a research method, document analysis is particularly applicable to qualitative case studies which include intensive studies producing rich descriptions of a single phenomenon (Stake, 1995; Yin, 2009). Merriam (1998, p. 118) illustrates how documents 'of all types can help the

research uncover meaning, develop understanding, and discover insights relevant to the research problem'. McCulloch (2004, p. 1) emphasises that to 'understand documents is to read between the lines of our material world', highlighting their depth and interpretive value. Consequently, documents were considered a significant resource in addressing the research aims of this study. Bowen (2009, p. 28) further notes that documents offer data that remains unaffected by the researcher, making them particularly useful for corroborating findings across different data sets and thereby reducing the influence of potential biases within a single study.

In this context, the documents collected contributed valuable additional insights and supporting evidence about monitoring of student progress and development in each of the research sites. The specific document types collected for analysis included all policies that referred to the monitoring of student progress and development as determined by the principals of each of the eight schools. In addition to informing the context of each case, documentary evidence offered insight into how school leaders formally prioritised and communicated approaches to monitoring student progress and development. These included assessment policies, wellbeing policies, special educational need policies, SSE reports, DEIS plans and a site-specific Raising Academic Achievement Plan. It also included WSE-MLL reports gathered at sites where these had been undertaken. School Self-Evaluation (SSE) reports were particularly valuable as they provided insight into the strategic priorities of each school. This information helped contextualise the interview and focus group data by offering a broader understanding of the priorities shaping practice within each site. Documentary evidence gathered at each research site is presented in table 7.

TABLE 7. DOCUMENTARY EVIDENCE GATHERED FROM EACH SITE

School	Assessment policy	WSE-MLL Report	Additional policy
RS1	Whole-School Policy for Assessment, Monitoring,	WSE-MLL Report (2013)	Wellbeing Policy (2024), Special Education Teaching Policy (2025),

	Reporting, Homework and Attendance (2024)		School Self-Evaluation (SSE) Report (2023-2026),
RS2	Assessment and Academic Integrity Policy (2025)	WSE-MLL Report (2019)	Homework and Study Policy (2023), Wellbeing Policy (2026)
RS3	Assessment Policy (2025)	WSE-MLL Report (2012)	Raising Academic Achievement Plan (2022-2024), Whole School Policy for Pupils with AEN (2022) Wellbeing Policy (2023)
RS4	Assessment Policy (2024)	No inspection report available as two schools amalgamated	Special Educational Needs Policy (2025-2026), Wellbeing Policy (2025)
RS5	Teaching, Learning, Assessment and Reporting Policy (2026)	WSE-MLL Report (2016)	Additional Educational Needs Policy (2021)
RS6	No assessment policy available	WSE-MLL Report (2011)	School Plan for Inclusive Additional Needs Education: A Whole School Approach (2023), DEIS Plan (2025-2028)
RS7	Assessment Policy (2016)	WSE-MLL Report (2020)	Wellbeing Policy (2018), Homework Policy (2025), SEN Policy (2025)
RS8	Assessment and Homework Policy (2022)	WSE-MLL Report (2018)	Wellbeing Policy (2021-2022), SEN Policy (2022)

This study aligns closely with Bowen's (2009) account of document analysis, with many of the functions he identifies clearly observable in the way documentary data were utilised. Firstly, documents were used to support and inform the interviews and focus groups conducted at each site. For example, site-specific questions were developed based on assessment policies. This approach enabled participants to confirm, reflect upon, and discuss issues grounded in the documentary evidence. Secondly, documents provided valuable descriptive data that informed the analysis of practices developed at each site to monitor student progress and development. These sources helped to contextualise and deepen the understanding of practices in place. Finally, documentary evidence was incorporated into the formal analysis for each research site.

These involved including documents in the coding process during data analysis. For instance, WSE-MLL inspection reports offered insights into the quality of monitoring of student progress and development within schools. This process enabled the researcher to generate new insights and to corroborate findings with accounts provided by participants in interviews and focus groups.

4.6. Data preparation and analysis

Nowell et al. (2017) caution that qualitative researchers must demonstrate rigorous, transparent and systematic data analysis processes to ensure credibility. Case study data analysis is an iterative process involving coding, categorisation and thematic interpretation, supported by strategies such as triangulation and linking evidence to research questions (Atkinson, 2002; Yin, 2009). Given the multi-site case study design, careful organisation and transparency are essential due to the volume and complexity of the data (Yin, 2018). To manage this complexity, data were first analysed within each site before cross-site comparison took place (Crowe *et al.*, 2011; Jenkins *et al.*, 2018). Accordingly, within-site analysis generated site-specific insights, followed by cross-site analysis to identify overarching themes (Miles, 1982; Jenkins *et al.*, 2018). Reflexive thematic analysis was selected as it offers flexibility and supports the analysis of complex, context-bound data through the identification of themes (Braun and Clarke, 2006). The six phases of reflexive thematic analysis include familiarising with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report. The steps outlined by Braun and Clarke (2006, 2012) were employed as an instinctive and developing guide more than a static map, as intended by the authors (Braun, Clarke and Hayfield, 2022).

4.6.1. Phase 1: Familiarising yourself with the dataset

Interview and focus group recordings were transcribed in Microsoft Word, recognising transcription as an interpretive stage of analysis (Braun and Clarke, 2012). This supports the

notion that transcription is not just a technical procedure but a central component of qualitative data analysis (Lapadat and Lindsay, 1999). Transcripts were read repeatedly to support immersion, with initial analytic notes recorded to capture emerging insights.

4.6.2. Phase 2: Coding

Data was coded using both manual methods and NVivo software. This approach aligns with Bruan and Clarke's reflexive thematic analysis, which emphasises the active and interpretive role of the researcher in meaning-making rather than viewing coding as a purely mechanical process (Braun and Clarke, 2006, 2021, 2022; Braun, Clarke and Hayfield, 2022). Transcripts were organised by site within NVivo 15, supporting systematic management of large datasets (Maher *et al.*, 2018). NVivo allows the researcher to work efficiently with complex coding schemes and large amounts of text, facilitating what Nowell *et al.*, (2017, p. 7) describe as 'both depth and sophistication of analysis'. According to Elliot (2018), coding involves decision-making about the transcribed data based on the research context. Bazeley (2020, p. 156) suggests coding provides a means for 'purposefully managing, locating, identifying, sifting, sorting and querying data'. When the researcher analyses the transcripts and assigns the codes/nodes, the meaning must be precise. A count on the nodes also indicates a frequency level, as demonstrated in the images below.

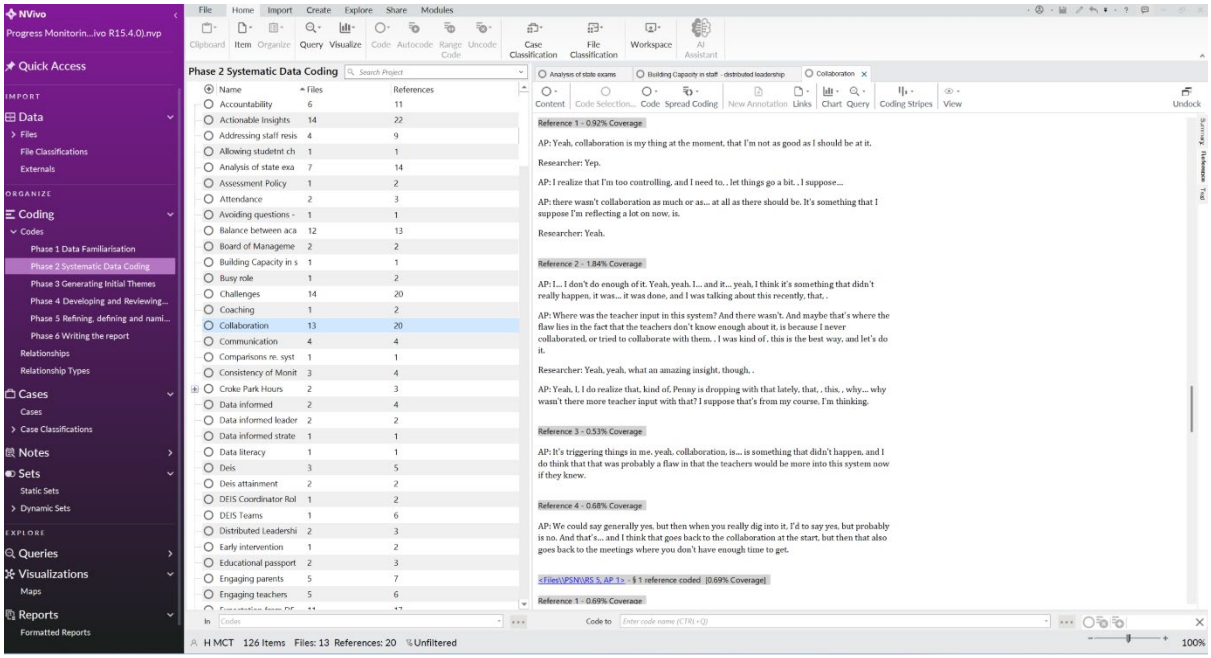


FIGURE 1. CODING IN NVIVO

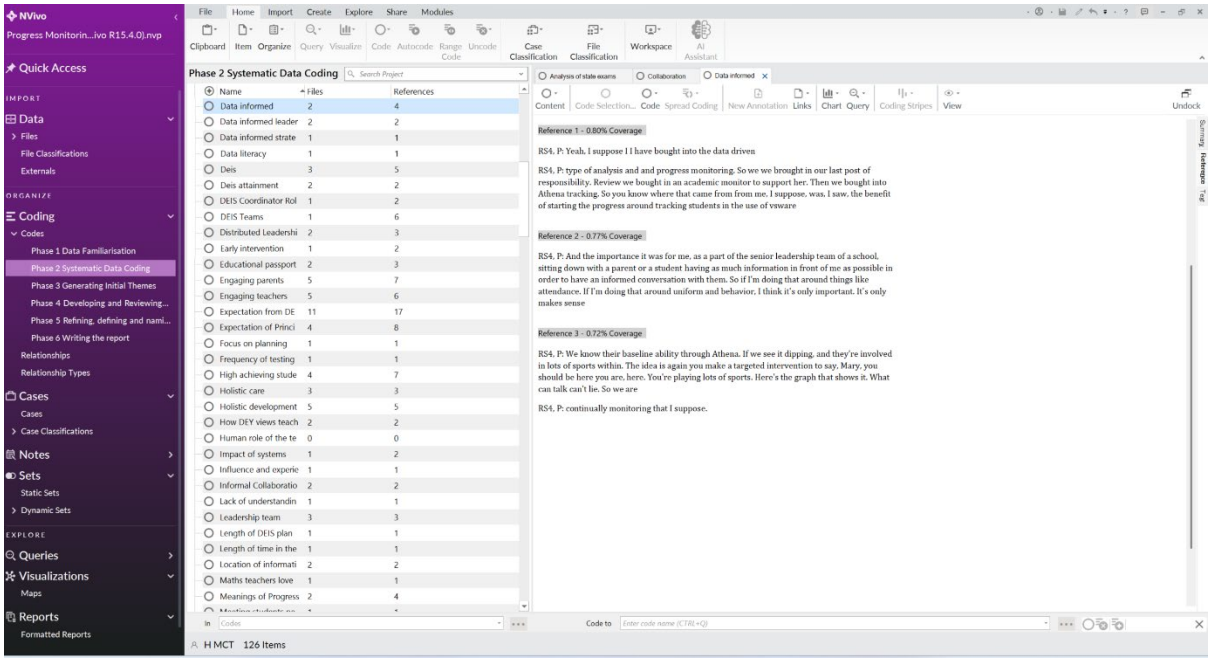


FIGURE 2. CODING IN NVIVO

As the researcher developed a thematic node structure, they create a code book to document the nodes and their descriptions, often organised in a Microsoft Excel spreadsheet to support

theme development. The codebook clarifies the meaning of each thematic node, enabling the researcher to apply them consistently across the data.

In contrast, the policy documents and WSE-MLL inspection reports related to each school were coded by hand and in Microsoft Word. Manual coding facilitated close engagement with the data, supporting immersion, reflexivity and the development of nuanced interpretations. In contrast, NVivo supported the systematic organisation, retrieval and management of large volumes of data, enhancing transparency and rigour in the analytic process (Bazeley and Jackson, 2019; Allsop *et al.*, 2022). The use of both approaches is supported in the methodological literature, which recognises that qualitative data analysis may be conducted using manual, technological or combined methods, each offering distinct advantages (Mattimoe *et al.*, 2021). Importantly, within reflexive thematic analysis, coding is understood as an iterative and interpretive process shaped by the researcher's theoretical position and analytic judgement (Braun and Clarke, 2006). Therefore, the combined use of manual and software-based coding was not intended to separate analytic processes, but rather to complement them, allowing for both depth of interpretation and systematic data handling. This hybrid approach enhanced analytic rigour by balancing interpretive engagement with organisational efficiency.

4.6.3. Phase 3: Generating initial themes

Thematic analysis was selected as the analytical framework for the definitional concepts of this study as it offers a way to systematically evaluate qualitative data, 'which can then be linked to broader theoretical or conceptual issues' (Braun and Clarke, 2012, p. 58). The third step is searching for themes and according to Braun and Clarke (2006), there are no specific rules about what makes a theme. The researcher examined the relationship between the codes and the emergent themes. Emerging themes are descriptive and emphasise patterns in the data, as illustrated in figure three.

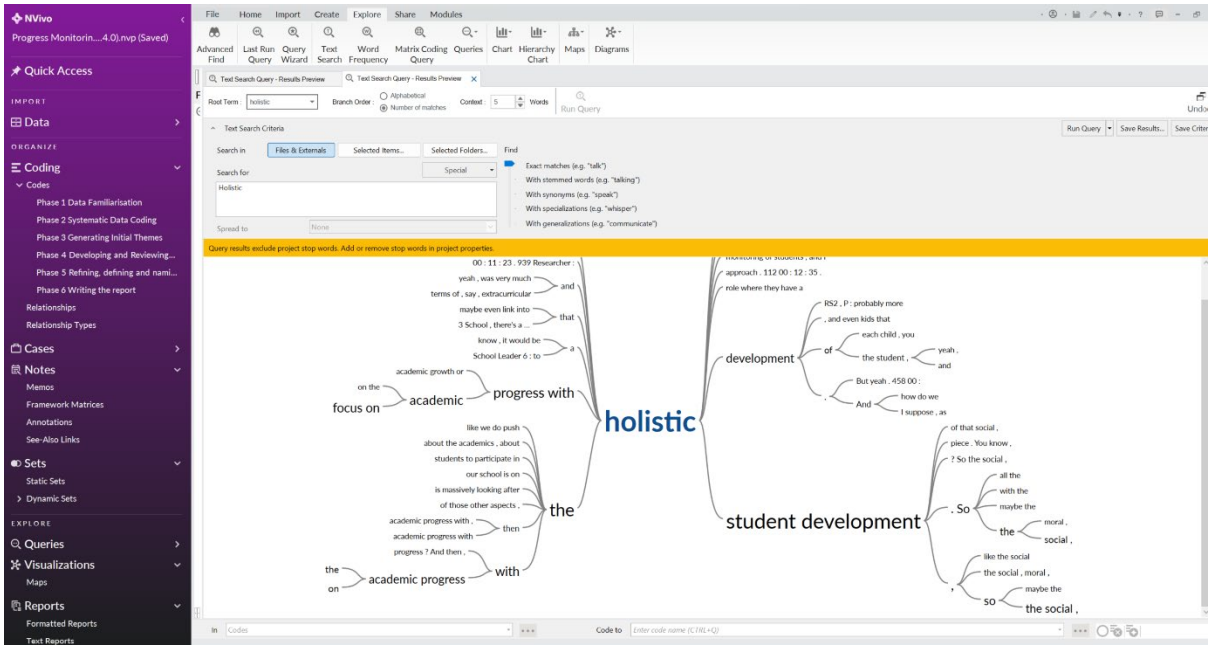


FIGURE 3. TEXT SEARCH QUERY IN NVIVO

4.6.4. Phase 4: Developing and reviewing themes

The fourth step modifies and reviews the identified themes and checks the data associated with each to ascertain if the themes work across all the interviews and the entire data set (Braun and Clarke, 2022). The purpose of thematic analysis is to identify patterns or themes within the data that address the research questions. It goes beyond mere description, involving interpretation and critical analysis of the data. Braun and Clarke (2006, p. 84) distinguish between two levels of themes: semantic and latent. Semantic themes reflect the explicit or surface meanings within the data, where 'the analyst is not looking for anything beyond what a participant has said or written'. In contrast, latent themes explore the underlying ideas, assumptions, and conceptualisations that shape the data's surface content. In this study, themes were identified at the semantic level, with a focus on interpreting and explaining participants' responses.

4.6.5. Phase 5: Refining, defining and naming themes

The fifth step involves defining the themes, which Braun and Clarke (2006, p. 92) describe as capturing the 'essence' of what each theme is about. During this process, recoding may be

necessary as themes continue to evolve and the researcher revisits the data. Braun and Clarke (2006) emphasise that coding in an ongoing and iterative process. Following this, the researcher clearly defines and labels each theme. Effective naming should be concise and reflective. Supporting quotations and detailed descriptions are developed to enhance clarity (Ahmed *et al.*, 2025).

4.6.6. Phase 6: Writing up

The sixth and final phase involves writing up the findings. This stage represents the final level of analysis, incorporating relevant data extracts and linking the results to the research question and existing literature. The process of Braun and Clarke's (2006) six-phase framework as it was adopted within this study is outlined in Table 8 below.

TABLE 8. SIX-PHASE CYCLE OF REFLEXIVE THEMATIC ANALYSIS (BRAUN AND CLARKE, 2022)

Process	Description
Step 1: Familiarising myself with the dataset	This involved listening to the audio recordings of the interviews (940 minutes) and the focus groups (480 minutes), which were completed at different time junctures. I carefully listened to each recording and transcribed them into Microsoft Word, a slow and iterative process. Once transcription was complete, I read through the transcripts multiple times to support familiarisation with the data. I also made notes directly on the transcripts and in my research journal to aid analysis and to acknowledge the role of researcher subjectivity.
Step 2: Coding	When familiar with the data, I began to code the dataset. The transcripts were uploaded to NVivo 12, which was later upgraded to NVivo 15, and organised by site. First, I coded the interviews with principals, followed by assistant principals and then the focus groups with teachers. Transcripts were coded line-by-line using NVivo, with initial codes generated inductively from the data across each individual case site. Policy documents and WSE-MLL inspection reports were coded by hand using Microsoft Word. Throughout this process, I frequently revisited earlier codes in light of new insights from subsequent data sets. For example, initial codes form the principal interview transcriptions were re-evaluated after coding of the assistant principal interview transcriptions, leading to the refinement and merging of codes where patterns of meaning became more apparent. This iterative process allowed a better understanding of the data. Coding was

	applied consistently across the entire dataset to capture key patterns relating to the research questions.
Step 3: Generating initial themes	Following coding, I examined the codes across each dataset to identify patterns of shared meaning. Themes were developed as coherent patterns of shared meaning underpinned by a central organising concept, rather than simply clusters of codes. This process involved actively interpretating relationships between codes and considering how different data extracts combined to form coherent and meaningful themes. For example, codes such as 'use of multiple platforms (VSware, Athena, Excel)', 'custom spreadsheets for analysis', and 'lack of single integrated system' were grouped to construct the theme 'Reliance on hybrid, customisable technological systems'. Additional codes such as 'teacher workload pressures', 'time-consuming data entry', and 'limited time for analysis' contributed to the development of the theme 'Barriers to data effectiveness'. This phase involved moving from descriptive coding towards more conceptual and interpretive analysis.
Phase 4: Developing and reviewing themes	In phase 4, I reviewed and refined the initial themes by checking their coherence against coded data extracts and across the entire dataset. This included evaluating whether themes formed a meaningful pattern, whether there was sufficient data to support each theme, and whether distinctions between themes were clear and defensible. For example, early candidate themes relating to 'technology challenges' and 'data reliability issues' were refined and separated to form distinct themes such as 'The challenge of achieving data reliability' and 'Reliance on hybrid systems', ensuring conceptual clarity. Some themes were collapsed or reworked where overlaps or inconsistencies were identified.
Phase 5: Refining, defining and naming themes	In this phase, each theme was further refined to identify its 'essence' and clearly articulate its scope and focus. Detailed analysis was conducted within each theme to determine what aspect of the data it captured and how it related to the overall narrative of the study. Themes were named to reflect their central organising concept. For example: 'Data-informed decision-making for targeted intervention' captured how data were used to identify underachievement and allocate supports; 'Holistic monitoring as a foundation for progress' represented the emphasis on wellbeing alongside academic monitoring; and 'Student engagement through transparency and self-reflection' reflected practices that positioned students as active participants in monitoring their own progress.

Phase 6: Writing up	This final phase involved weaving together the analytic narrative and data extracts to produce a coherent account of the data. Themes were presented in relation to the research questions and supported by illustrative quotations from participants. This phase represents the culmination of analysis for me, where interpretation is contextualised within existing literature and the study's contribution to knowledge is articulated.

4.7. Research integrity and ethical considerations

The research aims for the highest standard of integrity and good practice in research and takes cognisance of Tracy's (2010) eight key markers of quality in qualitative research including credibility, sincerity, worthy topic, significant contribution, rich rigour, meaningful coherence, resonance, and ethics. In the following sections, each of these criteria will be explored in relation to this research, illustrating how they were applied to enhance the overall quality and reliability of the research. The research project has been granted ethical approval by the DCU research ethics committee.

4.7.1. Credibility

Credibility in qualitative research refers to confidence in the truth of the findings, often enhanced through triangulation and member-checking (Tracy, 2010). To enhance the credibility of this study, I employed triangulation by using multiple data generation methods including semi-structured interviews, focus group interviews and document analysis of school policy documents and WSE-MLL inspection reports related to the research sites. This approach increased the credibility of the findings by providing multiple perspectives on the same phenomena (Ahmed, 2024).

4.7.2. Sincerity

Sincerity in qualitative research requires openness about the researcher's biases and reflections, which is facilitated through reflexivity (Tracy, 2010). In this study, reflexivity was prioritised through the use of a reflective journal maintained throughout the research process, alongside

regular discussions with supervisors. This ongoing self-examination helped ensure awareness of my subjective role in shaping the research (Braun and Clarke, 2022). For example, I documented my initial assumptions, emotional reactions to the data and evolving interpretations, enabling crucial reflection on how these influenced the analytic process.

4.7.3. Rigour

Rigour in qualitative research is illustrated through the thoroughness and appropriateness of the study's data generation and analysis processes (Tracy, 2010). There are multiple approaches that can be taken to enhance the researcher's ability to assess the accuracy of findings as well as convince readers of that accuracy (Creswell and Creswell, 2023). This study adopts a multi-site case study approach, grounded in a well-defined epistemological and ontological framework. Before the research, a small-scale pilot study was conducted to maximise the rigour of one of the data generation methods chosen (Tracy, 2010). The semi-structured interviews were piloted with two post-primary principals. This process allowed the researcher to confirm the time required to conduct the interviews and gather feedback on the design of the interview questions.

Furthermore, the selected methodological strategies, including data collection and analysis methods, are informed by established and validated theoretical foundations. The comprehensive and systematic coding approach used in reflexive thematic analysis (Braun and Clarke, 2022) further demonstrated the rigour of this research. In addition, if themes are formed based on converging numerous sources of data, then this process can be noted as adding to the rigour of the research. The evidence of principals, school leaders and teachers, along with policy documents and WSE-MLL inspection reports, were used to build a coherent justification for the themes that were established in this study.

4.7.4. Meaningful coherence

Meaningful coherence refers to the extent to which the research realises its intended purpose and integrates all aspects of the research process (Tracy, 2010). This research demonstrates meaningful coherence by aligning the research questions, the literature themes and the data generation methods to ensure that the study was coherent and that the data and literature supported the conclusions.

4.7.5. Resonance

According to Tracy (2010, p. 844) resonance refers to the 'research's ability to meaningfully reverberate and affect an audience' and can be achieved through aesthetic merit, evocative writing and formal generalisations as well as transferability. This study demonstrates resonance using rich, detailed participant narratives that evoke emotional and intellectual engagement. Bochner (2000, p. 271) seeks qualitative narratives that move the 'heart and the belly' as well as the 'head'. In addition, the findings illustrate experiences that extend beyond the immediate research context, allowing readers to draw meaningful parallels with their own situations.

4.7.6. Ethics

According to Felzmann (2009, p. 108), 'Research in school settings is an ethically challenging field that deserves more attention than it usually receives'. Furthermore, Yin (2018, p. 87), notes that 'A good case study research, like any other social scientist, will strive for the highest ethical standards while doing research'. The proposed study was approved in accordance with Dublin City University's (DCU) Code of Good Research Practice (DCU, 2024) (Appendix H). As a result, the approved ethical procedures were followed carefully throughout the research process. Permission was sought to advertise the research through the National Association of Principals and Deputy Principals (NAPD) platform. Following approval, an invitation email advertisement outlining the purpose of the research and participation requirements was sent to all NAPD

members via the NAPD end-of-the-week update. Recruitment of research sites ceased once the target of eight sites had been achieved.

Ethical risks were managed through anonymisation, informed consent and data confidentiality (Donnelly and William, 2008; Silverman, 2021). Participants received a Plain Language Statement outlining ethical considerations and an Informed Consent form. Informed consent was received for all data collected and all data storage practices adhered to the guidelines set by DCU. Audio data was transferred to the researchers' DCU Google Drive within 24 hours of interview and was deleted from the researcher's iPhone at that point. Audio data was deleted from the Google Drive once it was transcribed. Accurate records of the data were kept safely in keeping with the ethical requirements of constructing trustworthy research and in compliance with data protection requirements in Ireland and Europe. Written consent and documents collected from each research site were securely stored. Participant confidentiality and anonymity is maintained throughout the research process using pseudonyms and data anonymisation. Care was taken to ensure the reporting of objective data and multiple perspectives in a measured style uncontaminated by personal bias, political goals and judgement related to this exploratory study (Creswell and Poth, 2023).

4.7.7. Worthy topic and significant contribution

Worthy topics in research refer to those that are relevant, timely, significant and interesting (Tracy, 2010). Tracy also describes the various ways that research can make a significant contribution whether this is conceptually, practically, morally, methodologically or heuristically. It is deemed that this research will prove very useful to school leaders and teachers in the research sites to support them in the process of monitoring student progress and development. This research will potentially benefit those participating in the research because it will allow their voice to be heard. It will be an avenue for school leaders to hear the experiences and opinion of their staff i.e. assistant principals and teachers. The findings will

include recommendations for post-primary schools regarding better practice in relation to the systems used to monitor student progress and development and the use of the data gathered from these systems. These findings will be of use to the participants in the research study also.

4.8. Publication

The findings of this research will be publicly accessible for review by educational researchers, professionals, and policymakers. Participants are informed of this through the informed consent form.

4.9. Conclusion

This chapter has outlined and justified the methodological framework adopted in this study, demonstrating alignment between the research aims, philosophical positioning, and research design. A qualitative, multi-site case study approach, underpinned by a pragmatic and interpretivist orientation, was selected as the most appropriate means of exploring how systems for monitoring student progress and development are understood and enacted in Irish post-primary schools. The chapter detailed the rationale for the chosen methods, including semi-structured interviews, focus group interviews, and document analysis, and outlined the processes of data collection and reflexive thematic analysis. Particular attention was given to issues of researcher positionality, ethical practice, and strategies to ensure credibility, rigour, and transparency throughout the study. By combining within-site and cross-site analysis, the study is positioned to generate both context-specific insights and broader thematic understandings. The methodological approach outlined here provides a robust foundation for the analysis presented in the following chapters and supports the study's overall aim of contributing meaningful, practice-relevant insights to the field of educational leadership and data-informed practice.

Chapter Five: Research Findings

5.1. Introduction

This research explores the systems that school leaders use to monitor student progress and development in eight post-primary schools in Ireland. Data were collected through semi-structured interviews, focus groups, and document analysis, utilising a deductive research approach (Bingham, 2023). This chapter presents the findings generated from each of the eight research sites and includes seventeen semi-structured interviews, eight focus group meetings and analysis of policy documents and WSE-MLL inspections reports from the eight research sites. Both within-site findings and cross-site findings are presented to answer the following research questions:

1. What systems are in place for monitoring of students' progress and development in schools?
2. How are schools using the data collected?

5.2. Reporting of within-site findings

Given that this study adopts a case study design**,** the findings are presented in a narrative format, in accordance with established conventions of case study research (Flyvbjerg, 2006). To ensure the integrity of the research process and to facilitate a comprehensive and nuanced understanding of the findings, this chapter presents detailed reference to participant data, organised firstly by individual school site. Each site is reported separately to preserve the contextual integrity of the cases and to acknowledge the unique characteristics of each school setting.

In accordance with best practice in qualitative enquiry and to uphold ethical standards, a systematic approach has been adopted in the presentation of participant quotations. Only data directly relevant to the research aims are included, thereby supporting the protection of participant confidentiality. All research sites have been assigned pseudonyms to ensure anonymity. Specifically, sites are labelled sequentially (e.g. RS1, RS2), and these identifiers

are used consistently throughout the findings chapter. Participant quotations are referenced in italics and are accompanied by both the research site identifier and role descriptor. The inclusion of participants' professional roles is intentional, as this contextual information was deemed significant for the interpretation of the data while still preserving anonymity.

TABLE 9. ROLE AND IDENTIFIER

Role	**Identifier**
Assistant Principal 1	AP1
Assistant Principal 2	AP2
Assessment, Recording, and Reporting Co-ordinator	ARR
DEIS Co-ordinator	DC
Deputy Principal	DP
Guidance Counsellor	GC
Principal	P
Teacher	T

5.3. Research site one

5.3.1. School profile

TABLE 10. RESEARCH SITE ONE (RS1)

Category	Post-Primary
Enrolment Female	930
Enrolment Male	0
DEIS	No
School Fee Status	Non-Fee-Paying
Ethos	Catholic
Teachers	66

Special Needs Assistants	5

5.3.2. Monitoring of student progress and development in practice

The school employs a structured system for monitoring of student progress and development, which the principal points out is driven historically by external expectations and a necessity arising from increasing student numbers:

> *'Our big thing is to make sure that nobody gets left behind, and so nobody slips through the cracks. That, I suppose, has become increasingly important as we've gone from 720 to 930 students'* (RS1, P).

There is an assistant principal 1 post holder whose key responsibility is to lead the academic monitoring efforts in the school (AP1). There is evidence from the interviews to suggest that student progress and development are monitored through a multifaceted, data-informed system, with a primary focus on academic performance, supplemented by informal pastoral support for holistic development. The Wellbeing Policy (2024) describes the role of the subject teacher: 'The subject specific teacher is also responsible for monitoring the progress of each student in his/her care, providing assistance where needed' (Wellbeing Policy, 2024, RS1). The personal and social development of students is monitored informally:

> '*There's no formal system of monitoring their personal development. But we do have a really good pastoral care team'* (RS1, AP1).

This pastoral structure involves class tutors, year heads, student care team, and guidance team. Notably, Special Needs Assistants (SNAs) also contribute to monitoring students' social development and meet weekly with their deputy principal link person. This practice is consistent with the SET Policy, which formalises the role of SNAs in student monitoring, including weekly meetings with a deputy principal and contributions to student support plans

through classroom observations. The assistant principal 1 described how students' holistic development is celebrated regularly in the school:

> *'Like we had our prize giving last week, and all aspects of school and personal student development life are recognised there to try and show students that it's not all about the academics, it's about the holistic development. And I suppose, as a [school ethos] school, it's very much celebrated. But in the [school founder] tradition'* (RS1, AP1).

This aligns with the Whole-School Policy for Assessment, Monitoring, Reporting, Homework (2024) policy's stated aim of supporting both academic progress and student wellbeing, reinforcing the school's holistic monitoring approach.

This structured monitoring system is underpinned by formal policy frameworks, including the school's Whole-School Policy for Assessment, Monitoring, Reporting, Homework (2024) and Attendance Policy and Special Education Teaching (SET) Policy (2025), which establish the organisational and operational basis for monitoring practices observed in the research site. The impetus for establishing a formal monitoring system came from a Department of Education WSE-MLL inspection report in 2013, where it was explicitly recommended that, the school develop an 'overarching' profiling system:

> *An over-arching profiling system that encompasses the monitoring, mentoring and tracking of the academic progress of all students in a coherent manner should be progressed (WSE-MLL Inspection Report, RS1, 2013).*

Following this recommendation, the school established an academic council that meets monthly to monitor students' academic performance:

> '*So, our academic council is the committee that was set up after an inspection that we had in 2013, and it was suggested at that inspection that we would develop an overarching, profiling system to be able to track student performance'* (RS1, AP1).

This structure, which is formally referenced in the Whole-School Policy for Assessment, Monitoring, Reporting, Homework (2024), includes the principal, three deputy principals, guidance counsellors, and a special educational needs (SEN) representative.

5.3.3. Role of technology in monitoring student progress and development

The school uses VSware as its information management system to capture student attendance and to provide termly reports to parents on student progress. In 2023, the school transitioned its academic monitoring from a bespoke system, developed by a former member of the Board of Management, to a commercial platform, Athena Tracker. Technological systems are formally embedded within school policy documentation, with both the assessment policy and the SET policy explicitly identifying Athena Tracker as the central tool for producing individual student profiles and monitoring assessment outcomes. This '*system-wide tracking*' captures '*those summative moments'* (RS1, T1) including winter assessments, end-of-year assessments, mock examinations and Junior Cycle examination results. Initial baseline data used within this system is derived from CAT4 assessments which the SET Policy confirms are administered to all incoming first year and Transition Year students to establish student 'potential' (RS1, AP1). The assistant principal explains that Athena Tracker *'is about focusing on each student achieving their personal potential'* (RS1, AP1). It enables the identification of students who have not met expected targets using an 'expectation summary' generated after assessment data is entered. Athena Tracker provides colour-coded reports (orange for below expectations, yellow for in line, green for above) which support professional dialogue and allow for the immediate identification of students requiring additional support. Expectations are determined by the system's unique algorithm, which analyses students' prior assessment results entered by the school.

5.3.4. Data-informed decision-making

The data derived from monitoring systems is implemented to achieve several explicit goals. The foremost goal is ensuring that '*nobody slips through the cracks'* as the school increased in size from 720 to 930 students (RS1, P). Monitoring of students' academic performance is used to identify students needing the '*correct support'* and to ensure students at '*the opposite end are stretched*' (RS1, P). The assistant principal 1 notes that Athena Tracker is *'used to make*

appropriate interventions and to acknowledge students' academic performance at various points' (RS1, AP1). The data also informs decisions about curriculum and teaching methodologies. For example, student data identified a need for an alternative programme more suited for certain students who struggle with the traditional Leaving Certificate Established (LCE), leading to the introduction of the Leaving Certificate Applied (LCA) programme. The principal noted that the decision resulted in better outcomes for that cohort of students, preventing them from falling behind in the traditional Leaving Certificate Established:

> *'Their outcome wouldn't have been as good as it is, that's my view, and for some of our girls they wouldn't have stayed in school at all' (RS1, P).*

The assistant principal 1 also noted that the data highlighted a changing student profile, with fewer students naturally equipped with effective study skills. In response, the school introduced a school-wide study technique week. Plans are in place to build on this initiative through a peer learning week, during which fifth year students will mentor second year students. Data is also used to inform academic awards, celebrating both high achievement and *'academic effort'* (RS1, AP1). There are plans to present these awards at whole-school assemblies to promote wider engagement and motivation. In addition, data supports accountability by enabling comparisons between the school's state examination results and national norms. These outcomes are reviewed collaboratively by the subject departments, the principal, and deputy principals. For an additional fee, schools can submit their state examination data to Athena Tracker, allowing comparisons with results from other non-DEIS schools in its database. As described by the assistant principal 1, this process encourages subject departments to become '*proactive in their planning'* when '*their results are dipping*' (RS1, AP1).

5.3.5. Engagement with teachers

The vision for the future use of this system for monitoring student progress and development is to embed Athena Tracker into the school culture so deeply that teachers log into it almost as

frequently as VSware. The goal is to ensure academic monitoring happens on a continuous basis, with class teachers continually aware of student potential, as established by Athena Tracker's algorithm. Teachers in the focus group were positively disposed to using data to make decisions:

> *'I suppose any data that leads to us doing a better job for our students, because, whereas a lot of a lot of people might disagree, but we're a service industry, we might be a high end service industry, but we're still providing a service to our community and to the students and families that walk through our door every day. And so, anything, any data system that can support us in making more robust decisions, and that can throw a different light on decisions that we are already making and support us in working better can only be a good thing'* (RS1, T1).

The main challenges in maintaining the digital monitoring systems are teachers lack data literacy, securing sufficient time for teachers to use data and achieving full staff buy-in. Staff resistance is generally low, however, provided they see the benefit to students or to their own teaching. In saying that, teachers cite the implementation and maintenance of digital systems as '*time-consuming'* (RS1, T1, RS1, T2). Teacher 1 revealed that they no longer use the traditional physical teacher record book because it became *'unmanageable'*. Instead, they maintain their own digital system using an Excel spreadsheet to record corrections, notes on strengths/weaknesses, and any significant observations from class tests. This personal system is not integrated into the school-wide digital platforms. Inputting notes into a personal tracking system (like Excel) adds 30 seconds per copy, contributing to *'time poverty'* for teachers, which makes it challenging to maintain robust tracking systems (RS1, T1). T1, despite actively using the data, expresses a lack of robust understanding regarding the core metrics, admitting, *'I don't really understand percentiles'* or CAT4 tests fully, raising *'so what'* questions in their head about the tracking. T1 acknowledges the importance of understanding how Athena Tracker works:

> *'I think the more robust of an understanding that we have as an organisation, I suppose, as a learning organisation, the better the system will work for us'* (RS1, T1).

Teachers also pointed to a lack of shared professional discussion regarding standards and quality as a hurdle to the monitoring of student progress:

> *'We might create common exam papers. Yes, we may create a common marking scheme, but, but we don't have robust discussions around like the correction of longer questions. What exactly are we looking at it? Do we all have a common understanding of quality?'* (RS1, T1).

This lack of organisational-wide understanding limits how well the system can be utilised.

The data derived from the Athena Tracking system was described as '*sobering*' (RS1, T1), revealing that students who were performing at or above their potential in first year have fallen below potential by third year when tracked against their CAT4 scores. This integration is facilitated by the alignment between VSware, where CAT4 baseline data is stored, and Athena Tracker, allowing teachers to easily compare predicted potential with ongoing performance in a clear and accessible way. This realisation immediately prompts classroom-level questions about support strategies and teaching methodology variety.

The assistant principal 1 is primarily responsible for academic tracking and for '*enhancing learning through mentoring'* (RS1, AP1). Her duties include inputting state examination results to VSware and then to Athena Tracker, transferring teachers' end-of-term results from VSware to Athena Tracker and co-ordinating new initiatives such as mentoring meetings with sixth year students. End-of-term assessment results are inputted to VSware by teachers and transferred to Athena Tracker by the post-holder. Teachers have access to the results of the students that they teach. Teachers who also hold the position of year head are granted specific access to Athena Tracker, allowing them to monitor the academic performance of their entire year group. Following termly summative assessments, they are required to review the data, identify students in need of intervention and record these interventions within the system. Year heads also report emerging trends to the academic council, which can inform whole-school changes,

such as a campaign to review homework practices (RS1, P). Guidance counsellors primarily focus on academic interventions for sixth year students but may also work with younger students when referred by year heads. Meanwhile, special educational needs co-ordinators have access to data across all year groups via Athena Tracker. They monitor for underperformance and assess whether previously unflagged students may require additional evaluation or support.

5.3.6. Engagement with students

An important developmental objective in RS1 relates to the introduction of student and parent access to Athena Tracker in the future, allowing students to better visualise their progress. The assistant principal 1 describes the eventual goal for access:

> *'I do see a time that we will work towards having this parent student access, because I think it's much more than what their target is. I want them to be able to see their potential'* (RS1, AP1).

She describes how Athena Tracker advised her to delay this implementation:

> *'And I was getting all excited and thought about student and parents having access to it. But Athena's advice is that, you know, we build it into culture here within the school first before we take that step* (RS1, AP1).

The findings illustrate the development of the process of engaging students in their own progress monitoring in RS1. The School Self-Evaluation Policy (2023-2026) includes 'Use of Student Journals' as a SSE Focus in 2024/2025 where it notes the following:

> Tracking Progress Over Time: A well-maintained homework journal provides a comprehensive record of students' assignments and assessments. This documentation can help both students and teachers monitor academic progress over time, identify patterns, and adjust teaching strategies accordingly (School Self-Evaluation Policy, 2023-2026, RS1).

The assistant principal 1 describes her vision for engaging students in the monitoring process:

> '*We were trying to see how we could get students to set their targets. We don't have the Athena package that students and parents have access to, that's another €450 plus vat…the vision is that students will set their targets for their winter and summer exams…and it can stimulate a discussion between staff and student if they think the*

> *student has greater potential and needs to stretch themselves or otherwise, you know, need to manage their expectations'* (RS1, AP1).

The school piloted target setting with students in fifth year groups before moving onto students in second year last year. The teachers in the focus group confirmed that this is now a school-wide initiative although it is not mentioned in Whole-School Policy for Assessment, Monitoring, Reporting, Homework and Attendance Policy (2024) or the School-Self Evaluation Policy (2023-2026). One teacher described the target-setting process as becoming '*less conversational*' (RS1, T1). Recent developments indicate a shift from conversational, teacher-mediated target setting towards digital submission by students via Microsoft Forms. This teacher described how in the previous year, target setting was facilitated through structured classroom conversations, where teachers engaged students in reflecting on their prior attainment and supported them in setting realistic yet challenging goals (RS1, T1):

> *And so probably the conversation that I had with individual groups about target setting, the benefits of target setting, they didn't happen the way they did last year* (RS1, T1).

These discussions enabled teachers to probe students' thinking and guide them towards achievable targets. In contrast, the current approach involves students submitting their targets via online Microsoft Forms. While this allows for efficient collection of data, it has reduced opportunities for in-depth, formative dialogue. As a result, the rich classroom discussions, in which teachers could challenge assumptions and help students refine their goals, are often bypassed. Once collected, these targets are uploaded to the Athena Tracker system by the academic post holder, where they become part of each student's academic profile and can be monitored alongside assessment data. Teachers highlighted that these conversations are particularly important because many students tend to set ambitious goals without understanding the practical steps required to achieve them. As one teacher describes, students often lack awareness of *'the engine'* (RS1, T2), that is, the study habits, revision strategies, and sustained effort need to reach their goals:

> *So, target setting is part of taking control of your learning. And so, we would have those conversations. What are you doing to achieve the end goal? You have to have things in place to actually implement that and achieve that because of the whole engine. That's what makes it move. They're conversations I would be having very frequently, making sure that everyone understands the study skill, then they can apply it and actually achieve goals or results.* (RS1, T2)

Without guided discussion, target setting risks becoming a superficial exercise rather than a meaningful learning strategy. Consequently, teachers emphasised the need to work individually with students to translate targets into detailed and actionable study plans. This is especially important in the context of what was described as *'sky high'* (RS1, T2) levels of student anxiety, where students may overinterpret single assessment outcomes and set unrealistic expectations. In such cases, teacher-student dialogue is crucial in helping students to contextualise performance and adopt effective approaches to learning.

The introduction of Microsoft Forms and the Athena Tracker system demonstrate a school-wide effort to formalise student participation in the target-setting process and to ensure that students' perspectives are captured, recorded, and monitored over time. In this sense, the shift to digital submission aligns with the aims in the site's School Self-Evaluation Policy (2023-2026), which identifies the development of student voice and increased use of reflective tools as key priorities, by creating a consistent, trackable structure through which students articulate their learning expectations and reflect on their progress. However, what emerges from teacher accounts is not resistance to the SSE direction but a recognition that the mode of implementation influences the depth of engagement. The move to digital tools has increased efficiency and system coherence but has, in some cases, reduced the immediacy of these formative interactions.

5.3.7. Engagement with parents

The principal in RS1 is explicit that parental expectations are an important influence on the need to monitor student progress in the school. He describes how parental concerns outweigh those of the Department of Education:

> *'Who am I more concerned about? It would be the parents' viewpoint. ... the main customers, if you like, that we have to keep happy are the parents and the students'* RS1, P).

While communication with parents regarding progress monitoring data in RS1 primarily relies on Parent-Teacher Meetings and VSware reports, parents are *'made aware'* of *'academic tracking'* through an *'introduction booklet and introduction meetings'* (RS1, API). This is corroborated in the SET policy, which specifies that an annual information meeting is held each January for parents of incoming first year students. In addition, the assessment policy mandates that student reports are made available to parents via VSware ensuring ongoing communication with parents regarding student progress. This elaborated on by TS1:

> *'And that's the next step from the summative moments, that you that you report home to parents and to students, but it's not just on the summative moment. It might be linked to that reporting period. It might be linked to the winter assessment or the summer assessment, but you will bring in other evidence from across the term, across the year, and maybe even link into that holistic development of the student and how they're how they're doing or how they've done across the term, or the entire year'* (RS1, T1).

Occasional phone calls are necessary when concerns arise, and a formal reporting moment is '*quite a distance away'* (RS1, T1). Currently teachers are also instructed to use Athena Tracker data as a visual stimulus during parent teacher meetings to communicate the student's academic performance and potential to the parents.

5.4. Research site two

5.4.1. School profile

TABLE 11. RESEARCH SITE TWO (RS2)

Category	Post-Primary

Enrolment Female	279
Enrolment Male	349
DEIS	Yes
School Fee Status	Non-Fee Paying
Ethos	Inter-Denominational
Teachers	64
SNAs	17

5.4.2. Monitoring of student progress and development in practice

This research site is a '*rural DEIS'* school (RS2, DP). *Delivering Equality of Opportunity in Schools* (DEIS) is the Department of Education and Youth's main policy initiative aimed at tackling educational disadvantage of children from disadvantaged communities. The DEIS policy targets additional resources to those schools labelled 'DEIS' to ensure every child has an equal opportunity to achieve their potential (Department of Education, 2023). DEIS schools are required to monitor and evaluate progress through a structured action-planning process based on specific key priority areas including attendance, educational progression and transitions, literacy, numeracy and attainment (Department of Education and Youth, 2025b).

The deputy principal notes that personal and social development is monitored '*informally*' (RS2, DP) through the student support team meetings which occur every two weeks and review behaviour, attendance, attainment and wellbeing issues. The teachers in the focus group also acknowledge the need for balance, recognising that due to the student population's '*needs and vulnerability*' (RS2, T2), wellbeing is promoted strongly, although academic focus is increasing due to the widespread use of the technological monitoring system Athena Tracker:

> *'We would have a lot of needs and vulnerability in the students that are here, so we would kind of promote their wellbeing and stuff before we push the academic'* (RS2, T2).

The principal describes how the current focus on data is part of a long-term strategic effort to improve the school's profile and expectations for its students:

> *'We're very much trying to change a culture here, and we're starting to see the fruits of probably 10 years work. ... It's great, great progress*' (RS2, P).

The use of attainment tracking in this research site reflects a more systematic approach than that identified in earlier inspection findings in the school. The 2019 WSE-MLL inspection report explicitly recommended that:

> *'*All teachers should further develop and implement in daily lessons formative assessment, differentiation and attainment tracking practices to support improved student outcomes' (WSE-MLL Inspection Report, RS2, 2019).

Additionally, the school was urged to further develop its new monitoring and tracking system, exploring ways to link it with summative examination reporting and student-self tracking in school journals:

> 'Progress is monitored regularly by communicating with parents, progress reports, and a new tracking and monitoring system. It is recommended that senior management further develop use of this new monitoring and tracking system and explore how to link it into school house exam reporting systems, in conjunction with students' use of self-tracking in their school journals' (WSE-MLL Inspection Report, RS2, 2019).

It highlighted that, while student journals were used to by students to record results, their use was inconsistently applied and not fully embedded in classroom practice:

> 'Commendably, student homework journals contain attainment tracking graphs for students to record grades. However, these charts are inconsistently used. Teachers should encourage and support students to record results and reflect on progress on a regular basis' (WSE-MLL Inspection Report, RS2, 2019).

This indicates that, at the time of the 2019 inspection, the monitoring of attainment lacked coherence across teaching contexts.

5.4.3. Role of technology in monitoring student progress and development

In contrast, current policy frameworks point to a more formalised and systematised approach. The Assessment and Academic Integrity Policy (2025) explicitly aims to 'aid the tracking of

students' attainment' as they progress through the school, supported by the use of Athena Tracker. This represents a shift towards a more centralised and data-informed model of monitoring, where attainment information is not only collected but actively used to inform intervention and decision-making processes. The school utilises two systems to monitor student progress and development: '*VSware is our management information system. And then we have Athena for tracking'* (RS2, P). Teachers input class tests, term assessments and Junior Cycle results into VSware. These are transferred to Athena Tracker where the software uses CAT4 scores and past assessment performance to determine if a student is '*performing below, on, or above potential'* (RS2, T2).

The Athena Tracker software in this research site, however, is still perceived as having constrained functionality, particularly for senior leaders who wish to conduct large-scale or comparative data analysis. The deputy principal noted challenges in examining data across different student cohorts-such as comparing outcomes for EAL (English as an Additional Language) students and AEN (Additional Educational Needs) students against the general student population or analysing performance by gender; tasks that had been more readily achievable in the international context where she worked previously:

> *'I can't remember the name of the software now, but it would have been very easy for me to get an analysis of how the general student population is doing in comparison to the EAL students, in comparison to the AEN students. How are boys doing versus girls doing? We would have tracked their attainment just as a general group. How many students are getting Hs1, H2s. So, we would track that but then we would have also tracked what percentage students are making progress against those CAT4 indicators as well'* (RS2, DP).

In systems where progress monitoring is more developed, such as those in England, Australia, North America and the United Arab Emirates, data platforms typically allow for real-time filtering, cohort comparison, and visualisation through dashboards, enabling leaders to generate insights more efficiently and systematically.

The school does not have a dedicated IT administrator to maintain and manage the system effectively. The responsibility for updating Athena currently falls to one teacher, who undertakes the task informally and with limited time allocation and is finding aspects of the role challenging:

> *'Getting people to use it is the hardest part. And then, also, Athena themselves are not fantastic in dealing with stuff on their end. I'm waiting ages now for them to come back and change people's email addresses, because we all changed our email addresses recently, so some people can't log in, they can't use it and then that was 10 days, and, I'm still waiting for, like, so sometimes it can actually be on the Athena side of things. It just makes these things harder to use. But getting every teacher to use it is a challenge'* (RS2, T2).

This extract contributes to the theme of operational constraints in data-informed assessment systems, illustrating how the practical enactment of policy is mediated by technical limitations, staff capacity, and uneven engagement. Securing consistent teacher engagement in inputting class test results remains *'the hardest part'* of the process (RS2, T2). Variability in data entry practices may therefore lead to gaps, inconsistencies and partial representations in the overall picture of student progress and attainment. While data platforms are positioned institutionally as tools for enhancing oversight and informed decision-making, participants' accounts reveal the fragility of these systems in practice. In RS2, one of the teachers explains that the tension surrounding data use is borne out of a lack of technical skill in an ever-increasing workload rather than a deliberate defiance:

> *'I don't think it's a resistance of, like, just, I'm not doing it, or defiance, or anything like that. I think it's more just like a... they don't understand… I don't know if they understand the…… they're not competent in using it, and then they're just… they don't ask for the help then as well, which is…It's an impossible situation then, because… Yeah, and you're definitely in a position as well where there are so many overall changes in schools and education that this is just another thing, you know, to add to workload. So, you're trying to convince people that it's not to add to the workload, this is the workload'* (RS2, T1).

Importantly, the data highlights a disjuncture between the promise of data-informed monitoring and its lived reality, where incomplete data entry and limited analytical functionality undermine the reliability of outputs.

5.4.4. Data-informed decision-making

Student performance data plays a central role in informing key decisions across the school, particularly in relation to identifying students for additional support and managing academic pathways. As the deputy principal notes:

> *'I'd see the role of the data and using the analysis of the data is to pick up those students that might otherwise fall through the nets or cracks…If they're falling below on multiple subjects, then we try to plan an intervention'* (RS2, DP).

These interventions may include the implementation of mentoring structures to support underachieving students. Performance data also informs broader strategic and curricular decisions. For example, an analysis of CAT4 results revealing a cohort-wide verbal deficit prompted staff to prioritise literacy development across subjects. Similarly, subject departments utilise data to guide decisions around subject choice and class grouping. Teachers in the focus group from the Maths department, for instance, used performance trends to justify differentiated pacing across class groups, thereby encouraging more students to pursue Higher Level Maths at Leaving Certificate level. One teacher in the focus group remarked how the visual nature of the tracking software has transformed the culture of the school:

> *The culture in the school, since we've started, like, looking at the data and really trying to focus on the students' potential, has really come on. … I think it being so visual has definitely made a difference* (RS2, T1).

Student data enables the school to benchmark Leaving Certificate outcomes against national and DEIS averages, directly informing school development and DEIS planning. The principal conducts annual one-to-one meetings with all teachers to review previous results and projected grades for upcoming cohorts using Athena Tracker, a process designed to promote professional

accountability and reflective practice. The principal also speaks about student attainment at staff meetings and describes the following:

> *One of the things we've been looking at is exceeding the DEIS averages and moving towards national averages. ... I think it's important to say that out loud. I didn't say the Maths department or whatever department, I just said, look, there are a number of departments within the school who are exceeding the national average... and that hopefully brings around the conversation that we've actually the same students sitting in our class as well'* (RS2, P).

Monitoring systems are used to increase teachers' awareness of student potential, effort, and engagement, while also informing classroom practice.

5.4.5. Engagement with teachers

'*Teacher buy-in'* was reported as the most significant barrier to effective monitoring during the focus group interview (RS2, T1):

> *'The buy-in can be quite difficult. I suppose as a teacher, I love it because I'm organised, and I like to see the colours, and I see the progress*' (RS2, T1).

This challenge was clarified as relating specifically to engagement with the Athena tracking system rather than the VSware management information system. While teachers are required to engage with VSware as part of standard administrative and reporting processes, engagement with Athena is less embedded in routine practice and is therefore more dependent on individual teacher uptake.

Professional development opportunities are provided to support the use of monitoring systems, typically in the form of *'communities of practice'* (RS2, P) held during lunchtime, as well as through inputs on whole-staff days. However, attendance at the optional lunchtime sessions tends to be low, suggesting that workload pressures and competing priorities may limit teacher engagement:

> *'So, we have run those mini professional development sessions already around data, but it'll only been one little 20 min one, for example, and then we will do in August. Now there's a plan to do a couple of carousels where teachers can choose to come in and choose, like if they want to do behaviour management, or if they want to do one using Microsoft office, or they can come and choose the using data to support learning or teaching. I know it's hard at lunchtime in Irish schools. We'd only really get a few people like, it's like a handful'* (RS 2, DP).

Collaboration around the use of data is also encouraged through regular subject planning meetings and departmental reviews of Leaving Certificate results in August and September. These structures promote professional dialogue and collective analysis of student outcomes. The monitoring of student progress is explicitly understood as a whole-school responsibility, reinforcing the shared accountability central to the school's improvement culture: *'It would definitely be seen as everybody's responsibility'* (RS2, P).

5.4.6. Engagement with students

This is the only research site that has opted, at an additional cost, to allow senior students direct access to Athena Tracker. There is evidence of an increased emphasis on the development of student responsibility in monitoring attainment in RS2. The Homework Policy (2023) identifies it as a student responsibility to be 'proactive in tracking their attainment and achievement levels', reinforcing the role of student journals and reflective practices (Homework Policy, 2023, RS2). This dual approach, combining digital data systems with student-led tracking, suggests an attempt to embed attainment monitoring both structurally and pedagogically within the school. Certainly, students play an active role in monitoring their own academic and personal development. During weekly tutor time sessions, students record and reflect on their attainment, attendance, and behaviour in their school journals, with the intention of promoting ownership and awareness of progress. As students at Junior Cycle level do not have access to Athena Tracker, it is likely that reflections are based either on teacher-mediated feedback or students' own recall of recent outcomes. This raises questions about the extent to which the

process is genuinely data-informed, and whether it fully supports accurate self-assessment and meaningful learner ownership.

At Senior Cycle level, students are provided with individual logins to Athena Analytics, enabling them to access their own performance data following key summative assessments and state examinations, including results, graphs, and targets. This transparency is viewed by staff as highly beneficial in fostering motivation and encouraging students to take responsibility for their learning. However, the teachers in the focus group reported that measures have been introduced to restrict students from altering their targets following incidents where some initially modified data to make their results appear more favourable.

5.4.7. Engagement with parents

Parents are primarily engaged in the monitoring process through parent-teacher meetings (PTMs). Specifically, during the sixth-year parent-teacher meetings, parents receive a printed A4 page student profile, or, in some cases, a more detailed report generated from the Athena system. These profiles present an overview of the student's results and progress across the Senior Cycle, enabling more focused and informed discussions between teachers and parents. This initiative was first introduced as a pilot programme and is currently being extended across the school. T2 from the focus group interview describes parents' reactions:

> *'The parents love it. Like, now they look…because what we do is we print off the students' profile for them, so they get that when they come in for their parent-teacher meetings. And now they kind of expect it when they come in'* (RS2, T2).

Prior to the introduction of this initiative, parents received only verbal feedback at PTMs and were not provided with a written report. The principal highlighted how having the data physically present changes the nature of the interaction:

'Standing there handing it out and speaking to parents. They were really, I suppose, appreciative of having that information. And being able to have those conversations, then. A more co-informed conversation' (RS2, P).

Feedback from parents has been consistently positive, particularly in cases where data-informed interventions have been implemented for underachieving student as described by the deputy principal:

'The feedback has been positive; they've been grateful that we've taken the time to actually look into the students' data a little bit more, and to put interventions in place for them. I think parents are also grateful because it helps them have a better understanding of their own child as well. So, when you have a parent who's trying to drive a student to get 600 points, when you know the poor soul might only be able to get 300 points... it's helped in that regard' (RS2, DP).

The availability of clear and comprehensive performance data is viewed as beneficial in managing parental expectations and in supporting a shared understanding of each student's potential and progress. The principal mentioned using data to encourage parents to see their child's strengths:

'Sometimes parents might not be aware that actually, they're very much able for the higher level. And they're very much able for it. But they may just need a little bit extra' (RS2, P).

5.5. Research site three

5.5.1. School Profile

TABLE 12. RESEARCH SITE THREE (RS3)

Category	Post-Primary
Enrolment Female	0
Enrolment Male	1004
DEIS	No
School Fee Status	Fee-Paying
Ethos	Catholic
Teachers	89

SNAs	4

5.5.2. Monitoring of student progress and development in practice

RS3 is an urban, fee-paying school. Based on the transcripts from RS3, insights were gathered regarding the school's structured systems for monitoring student progress and development. The data reveal an organised approach that integrates academic tracking, holistic student monitoring, and data-informed decision-making. The documentary evidence from school policy and inspection reports reinforces this depiction of an embedded monitoring system. The Assessment Policy (2025) outlines a 'robust academic tracking, monitoring and goal setting system' involving year heads, form tutors and the additional educational needs (AEN) department, indicating that responsibility for tracking is distributed across the school. This aligns with the Raising Academic Achievement Plan (2022-2024), which prioritises the development of systems that allow for 'quick, efficient and accessible analysis of student performance'. The WSE-MLL Inspection Report (2012) confirms that this is not a recent development, noting that 'detailed and comprehensive analysis of results is carried out, and students' grades are tracked', highlighting the long-standing nature of this approach.

The Assessment, Recording and Reporting co-ordinator (ARR), an assistant principal 1, is assigned specific responsibility for tracking academic engagement. He explains the goal of progress monitoring in this school:

> *'I think on an individual student basis, it's to maximise their potential in whatever that area might be. It might not necessarily be CAO points, but it could be…my own son was an artist in the school. CAO points weren't the focus, but art and music were the focus, and our school really caters for those type of kids who may not be, I want 625 points, but I want to go to NCAD, or I want to create a portfolio for something else, or I want to make a guitar, or whatever it might be, so…So, the reason is to identify any areas where students may be falling down, but also areas where students may be achieving… achieving a high level of success that may not have been predicted with their initial scores'* (RS3, ARR).

Monitoring begins with the administration of online CAT4 testing to all incoming first year students. The results are used to organise six class groups of broadly equivalent academic ability, consistent with the school's mixed ability teaching policy as described by the ARR co-ordinator:

> *'And with the whole, I suppose, department guidelines years ago of mixed ability teaching, we really do that to, you know, 100% our teaching is mixed ability, and it really makes a difference. And I think long-term if you looked at our results and our data, I think it's that mixed ability teaching that brings those average points up to the 509, because those lower kids are mixed, and they're sitting beside someone that's brilliant. You see it by fifth and sixth year, where the good kids are helping the weaker kids, and there's a kind of collegiate aspect to learning in [RS3]'* (RS3, ARR).

The CAT4 score is widely regarded by staff as a reliable predictor of later Leaving Certificate performance. Student progress is subsequently tracked through summative examinations held at Christmas and in summer. The overarching goal of this monitoring system is the early identification of underachievement, allowing for timely intervention and support, to ensure students reach their potential. The ARR co-ordinator gave the following example:

> *'I'm looking at the data yesterday, and there was a student that came in and averaged, like, 34% up to Christmas, but then averaged 59% in the summer. You're thinking, wow, a jump of 25%. He may not jump out in data, because he only averaged 59%, but when we're looking at the data, we're looking at those kind of things of, well, this kid made major progress, and maybe there was an intervention put in place, there might have been a family separation, like, you know yourself from teaching, there's always these kind of… the things that are happening outside the classroom that we don't know about sometimes can have a negative impact, so…It's to… I suppose it's to maximise everybody's potential, and to see areas where kids may be falling through the cracks a little bit*' (RS3, ARR).

The evidence suggests that the school places strong emphasis on students' personal and social development alongside academic attainment. Each base class is assigned a form tutor who stays with this class for the six years that they are in school. The form tutor, typically an assistant principal 2 post, plays a pivotal role in this area, meeting with the students in their care daily

or weekly, as necessary, to discuss progress and wellbeing. Tutors frequently support students experiencing personal challenges, such as anxiety, bereavement, or family separation. Such personal challenges are not tracked formally, and the support is provided to promote the element of 'care' that is important to this school's ethos.

Another assistant principal 1 is '*in charge of extension programs and student leadership programmes*' (RS2, T1). Student participation in co-curricular activities is encouraged and commended on the form tutor report that students receive at the end of each term. The school also administers Pupil Attitudes to Self and School (PASS) surveys to measure students' self-perception as learners. The PASS surveys, which are generally administered to all students, are described as the '*last piece of the puzzle*' by the principal in RS3. These results are correlated with academic data and indicators of engagement in co-curricular activities, helping to identify students whose low self-perception may contrast with their observed performance or behaviour. Year heads oversee this correlation and alert any students needing support to the form tutor initially. Finally, all teachers assign effort grades, on a scale from one to five, at midterm intervals. These are used by class teachers and year heads to monitor student motivation and engagement and are shared with parents via the Compass management information system.

Policy and inspection evidence further validate the school's holistic approach to monitoring. The WSE-MLL Inspection Report (2012) highlights the strong pastoral care structure, noting that form tutors provide 'continuity of care' and act as key advocates for students. This aligns with the findings that form tutors play a central role in supporting student wellbeing. In addition, the Raising Academic Achievement Plan (2022-2024) incorporates the use of attitudinal surveys, such as PASS, to identify early indicators of disengagement. The AEN policy (2022) also reinforces this holistic framework by stating that subject teachers retain

responsibility for the 'progress and care of all students', supported by a collaborative team approach.

5.5.3. Role of technology in monitoring student progress and development

This research site relies on a structured ecosystem of digital tools managed by the ARR co-ordinator. Compass is the primary system used by staff to input registration and exam results. A key challenge is ensuring consistency and correct input of levels into Compass. Athena Tracker processes the data harvested from Compass, applying an analysis based on the initial CAT4 entrance scores. Microsoft Excel is used extensively by the ARR co-ordinator for initial analysis, data visualisation, generating custom registers, and breaking down reports into component parts. The ARR co-ordinator's skill with Excel allows for quick analysis of provisional results before the official Athena Tracker report is ready.

5.5.4. Data-informed decision-making

In this school, data serves as a central driver of school improvement, shaping interventions, informing instructional practices, determining resource allocation, and developing a culture of accountability. The ARR co-ordinator points out: '*You have data, you have information, you can make interventions'* (RS3, AP1). This consistent and systematic use of data has become embedded in the school's operational and pedagogical decision-making processes. Student data are continuously analysed to identify patterns or anomalies that may indicate underachievement. When such trends are detected, year heads promptly communicate with the students concerned, their parents, and the additional educational needs department. This proactive approach enables the school to implement targeted interventions quickly, ensuring that academic or pastoral supports are provided as early as possible.

Analysis of student performance data directly informs teaching and learning. Subject departments engage in topic-by-topic analysis of results, leading to adjustments in their

schemes of work to address areas of identified weakness. Moreover, student performance data can guide the focus of the school's peer observation working group, ensuring that collaborative professional learning remains responsive to emerging needs. T2 describes this as follows:

> *'So, we have a peer observation working group. And we look at a focus every term, and it's always underpinned by whatever our SSE focus is and we share best practice, and we go into each other's classes. And from that, you'll very often learn a strategy or see somebody else teaching using a particular strategy which really works for certain kids, like how we work with the overachievers. Sometimes the review of the data could lead to this focus, then to the peer observation'* (RS3, T2).

The introduction of school departmental results publication approximately five years ago has created a strong culture of accountability. Departments now have transparent access to one another's performance data, creating opportunities for professional dialogue but also an element of competition that encourages staff to strive for continuous improvement. The ARR co-ordinator describes the following:

> *'I think when you introduce a little bit of competitiveness, without calling it that, it can drive teachers to want to do better. And I think sometimes teachers need a bit of a spark... For me, it is a little bit, like, coming from the private industry, going, no, we can do better, and we can look at information... It provides us with a challenge*' (RS3, ARR).

He describes how overall student outcomes have steadily improved since the introduction of systematic data tracking, even as national averages have shown a downward trend:

> *So, the national average, as it's going down, we've been going up. So, since the data has been introduced, it may not, it may be a coincidence, but it may not. The results in [RS3] have gotten better* (RS3, AP1).

The use of data has also contributed to a shared belief among staff that students perform to the level of expectation set for them. This mindset has led to a significant increase in the proportion of students opting to take higher-level subjects reflecting both elevated expectations and improved confidence in student potential. The principal describes the following:

'And I think that it feeds into people's discussion. The first thing is the percentage taking higher level has risen dramatically because I think people began to realise the students will perform to the level of expectation in a lot of cases…I think the kind of the real way it works its way into departments is more the departments spend more time now talking about teaching…And around 50% of the staff are actively engaged in peer observation. Peer observation takes a target. It takes a focus and a good bit of time that's going to be drawn from the results analysis' (RS3, P).

5.5.5. Engagement with teachers

The most critical element of the monitoring process in this research site is acknowledged to be the teacher's ability to know the students: *'I think nothing replaces a teacher who knows their students'* (RS3, P). Engagement with the school's monitoring systems is mandatory for school leaders and teaching staff. However, the findings indicate that the school's data culture encountered significant initial resistance as the principal recounts:

'The original process of tracking was met with a lot of resistance. When I initially arrived... even very good teachers in the school fought against it. One publicly threw it in the bin and said we were dealing with students and not figures' (RS3, P).

The data culture at this school is sustained through clearly defined leadership formal roles and responsibilities indicating a structured accountability that being able to fund privately paid additional leadership positions allows. The teachers in the focus group raised this point:

'I think it's really important, though, just because I'm sure you are researching in a lot of schools here, as you know, is a private school, and it has been decided that the school has justified a post for someone who takes that raw data and turns it into something but even, as [T1] says, it turns it into something slightly more user friendly. But then I have a number of steps to go, but I think in a lot of school contexts, there isn't that person there to take that so we'd have to be realistic and say, I think my previous school, okay, we could have got Athena, and we could be doing this for Compass. There wasn't a person there, who kind of coordinated it (RS3, T2).

'And as you said, that's just one step, but it is an important step' (RS3, T1).

Oversight of academic progress primarily lies with the school's ARR co-ordinator. The principal describes this role as follows:

'It's an AP1. And it's called student academic tracking and engagement. It's a monitoring of two things because they're linked; students who don't engage with the

> *extracurriculars or with sport or with drama or anything. They tend also to be the ones with the highest absentee rates'* (RS3, P).

This individual is responsible for analysing results and maintaining both the Compass and Athena Tracker data systems. The role demands a considerable workload, with the co-ordinator frequently working beyond contracted hours, including weekends, to manage data input, validation, and reporting processes.

Monitoring of student achievement and engagement is also explicitly incorporated into the formal job descriptions of year heads and form tutors. Year heads function as '*mini team leaders'* (RS3, P) coordinating the work of form tutors within their year group. This structure reflects a shift away from a traditional emphasis on behaviour management towards a stronger focus on academic tracking and student progress (RS3, P). A clear message from leadership reinforces that student monitoring is a collective responsibility as the principal describes:

> *'What it comes down to is that you, the people who are responsible for certain aspects of it, you drive home that, in other words, the teachers are very responsible for the quality of learning in their class, the form tutor is very responsible for how their students engage and you support them, and year heads have an overall responsibility to manage a team of six form tours as a kind of a learning team'* (RS3, P).

The principal, three deputy principals, and year heads each have designated roles in the collection, interpretation, and use of data to guide decision-making. This top-down model ensures that accountability for student outcomes is embedded at every level of school leadership. Initial implementation of the monitoring systems encountered significant resistance and scepticism from some staff members who felt that data entry detracted from their core work with students. Although acceptance has grown over time, residual resistance remains, often linked to time constraints and limited digital confidence among staff.

To address these challenges, the ARR co-ordinator delivers ongoing professional learning, including demonstration videos, guides, and short in-house training sessions:

> *'Some people, if they've been introduced to Excel, have no fear of spreadsheets and data, but other people, if they're not mathsy-based, have an absolute fear of numbers. Anything that's a spreadsheet-looking, you can show them, and they're like, oh, no, it's like you've electrocuted them'* (RS3, ARR).

Despite this support, some teachers continue to express apprehension toward using spreadsheets and rely heavily on colleagues for technical assistance. This indicates that while the system is institutionally embedded, varying levels of digital competence and workload capacity influence the consistency of engagement.

Additionally, while policy frames departmental analysis in formal terms such as 'comparative analysis' and 'subject improvement plans', participants in the teacher focus group described an element of '*competition*' between departments, indicating a more complex and dynamic cultural reality:

> *Monitoring systems have definitely boosted, like, standards in teaching. It's definitely, I don't know if I'd use the word, competitive, but it's now at a stage where we're starting to compare best results, like, we now… you're now able to label, like, oh, that year group is really good. You know, which can be really positive or really negative, whichever way you look at it. You know that year group now, their maths is solid, or they're going to go on to do whatever. It's definitely, I think, boosted the kind of, maybe even the conversation around higher standards in the staff room* (RS3, T1).

5.5.6. Engagement with students

Active participation is also encouraged among students and parents, although they are not given direct access to Athena Tracker. Students at this school are actively engaged in monitoring and reflecting on their own academic progress. A teacher in the focus group details how this works in practice:

> *'They do a review in their journal periodically... They compare them with the target that they set, okay? And they set a new target, yeah, and then they give, two per subject, two specific strategies to improve... I think they're in a culture of review'* (RS3, T2).

Twice annually, they complete a structured self-reflection exercise in a designated section of their school journal. This process involves reviewing their house examination results, comparing current performance against previous targets, and formulating specific

improvement strategies for the following term. The review process is monitored by form tutors, who provide oversight and feedback, while parents are required to sign the reflection page to acknowledge their child's review. This practice reinforces a school-wide culture of review, accountability, and goal setting, encouraging students to take increasing ownership of their learning journeys. This emphasis on student self-reflection is also reflected in school planning documents. The Raising Academic Achievement Plan (2022-2024) explicitly frames assessment as an opportunity for students to 'grow, develop and improve', reinforcing the role of reflective practices in supporting student ownership of learning. The structured journal-based reflection process described by participants reflects this policy intention and demonstrates the integration of reflective practices into everyday school routines.

5.5.7. Engagement with parents

The emphasis on comprehensive monitoring at this research site is strongly influenced by parental expectations, reflective of the school's fee-paying context, where high academic standards and accountability are central to the school culture. However, parents are not given direct access to Athena Tracker:

> *'I have hesitations about sending those tracking reports to parents…I just wonder is it necessary? I think it might change the kind of conversation a lot. At the moment in their journals the students are asked to do a self-review, and to set actions to do, to improve. Better than cold analytical data not presented by somebody who really understands the data'* (RS3, P).

The ARR co-ordinator describes the pressure exerted by parents as follows:

> *'I suppose the most challenging aspect of the job in [RS3] would be the level of academic expectation from parents... there's definitely a pressure from parents to make sure that these kids have the highest standard of teaching... because, you know, they're paying for it'* (RS3, ARR).

Parents receive formal progress reports twice per year. These reports provide a detailed overview of student progress and are used extensively during parent-teacher meetings to provide factual evidence of student achievement and growth across multiple subjects. This

approach to parental communication is consistent with expectations outlined in the Assessment Policy (2025), which mandates that formal reports are issued through the school's management system, Compass. This data-informed approach allows teachers to engage parents in constructive discussions grounded in objective performance indicators, helping to align perceptions of student ability with empirical evidence.

The ARR co-ordinator describes a notable innovation was introduced by the Mathematics Department, which redesigned its reporting format to include twenty discrete components of assessment:

> '*The results for the summer exam, we've broken it down into, say, twenty components, and we put the twenty components in Excel, and we mark each individual component, and we put the results in Excel… and we have a system where it converts it to a percentage, so the report is the 20 components of the summer exam broken down into individual percentages*' (RS3, ARR).

This detailed approach provided parents with a clearer understanding of student strengths and areas for improvement, beyond a single percentage grade. The ARR co-ordinator describes how this enhanced feedback model was met with strong parental approval, as it offered meaningful insights to support learning at home:

> *'I actually got an email yesterday from a parent saying, thanks for the breakdown, really interesting to see. Yeah. He has strengths and weaknesses, because 42% means nothing. If he got 100% in the first 8 questions and left the other 8 blank, he may have ran out of time. So, that kind of a breakdown, going forward is useful'* (RS3, ARR).

At the leadership level, the ARR co-ordinator regularly presents analysis of Leaving Certificate results to both the Board of Management and the Parents' Association, showcasing trends in achievement and highlighting the school's continued success. This practice reinforces transparency and promotes stakeholder confidence in the monitoring process.

5.6. Research site four

5.6.1. School profile

TABLE 13. RESEARCH SITE FOUR (RS4)

Category	Post-Primary
Enrolment Female	277
Enrolment Male	404
DEIS	No
School Fee Status	Non-Fee-Paying
Ethos	Catholic
Teachers	44
SNAs	4

5.6.2. Monitoring of student progress and development in practice

RS4 is a school created when two schools amalgamated in 2022. This research site demonstrates a structured phased approach to monitoring student progress, primarily focused on academic progress but also incorporating holistic student development. This structured approach reflects the formal framework outlined in the school's Assessment (2024) and SEN (2025-2026) policies, which emphasise maximising the potential of each student through systematic, data-informed monitoring. The school expanded its monitoring scope from second- and fifth-year students last year to include second, third, fifth, and sixth year students this year, illustrating a phased implementation approach that aligns with policy intentions but is adapted to suit their needs rather than applied universally across all year groups simultaneously. The principal describes the strategy:

> *'Our belief was to do it slowly, take our time and to nearly wait until people were asking for it... it's nice and easy wins the race sort of a thing'* (RS4, P).

The assistant principal 2 post holder with responsibility for Academic Monitoring confirms how the school has '*very much staggered'* the introduction of the monitoring system '*slowly'* to ensure the system is used effectively rather than being a burden.

Students complete '*four big tests*' (RS4, AP2) at midterm, Christmas, Easter and summer. Mock examination results for third- and sixth-year students are also monitored: '*We don't track class tests…We track their mock results'* (RS4, AP2). The primary goal of monitoring is '*to raise standards*' (RS4, AP2) and maintain a high level of performance, particularly following the schools' amalgamation in 2022, aligning closely with the policy commitment to maintaining high expectations and 'maximising student potential' (RS4, Assessment Policy, 2024):

> '*You want to keep standards high. So, I think our number one is, we're really student centred. So, we want standards to be really high, but in a way that the students are motivated to learn. It's not like a whip. And like, there are some students that have oh, my God! Have blossomed under this'* (RS4, AP2).

Monitoring involves comparing student performance against baseline expectations derived from CAT4 tests. Interventions are targeted and individualised rather than general, mirroring the SEN policy focus on identifying and supporting students performing below their 'unique potential' (RS4, SEN Policy, 2025-2026):

> *'Well, it goes back to what I was saying about the individual meeting the individual, like just making sure the message is as individualised as possible, and that the student feels like you're not just talking to the group, but that you're having a conversation with them, particularly at Senior Cycle, because, you know, as students are a little bit older now, you know, they're young adults, and they're not being bought off with the cliches*' (RS4, P).

The assistant principal 2 post holder, meets students to set targets, review exam performance, and help with study planning, confirming the role defined in policy documentation, which assigns responsibility to designated staff, including post-holders, to engage with student data (RS4, SEN Policy, 2025-2026). This system primarily targets students falling below expectations, as well as high academic achievers who are underperforming, demonstrating a targeted intervention model consistent with policy (RS4, SEN Policy, 2025-2026), rather than just focusing on students already served by the SEN department.

5.6.3. Role of technology in monitoring student progress and development

This research site employs several technological systems for monitoring student progress and development but is aware of the pitfalls of using too many tools. It uses Tyro for logging assessment results, which are then transferred to Athena Tracker. Tyro is also used for recording merits, demerits and '*neutral remarks'* (RS4, T1). SchoolWise is a technological tool used by the SEN team in the school primarily for curriculum planning and to assist the SEN department in managing and updating student support files, directly reflecting SEN Policy (2025-2026) requirements for the maintenance of student support files. Athena Tracker is employed for academic tracking, setting targets, comparing results to CAT4 test predictions. This includes a notes section for staff to record meeting details and targets, supporting structured intervention planning as outlined in the SEN policy. The PE department in the school also uses Athena FitnessMark, which is a specific tool developed by Athena Analytics that monitors students' physical development.

5.6.4. Data-informed decision-making regarding progress monitoring

The use of student data is intended to drive targeted interventions and improve student outcomes, reflecting the Assessment Policy (2024) emphasis on using assessment data to inform teaching and learning. A significant decision informed by academic results was the creation of the academic monitor AP2 post to specifically address performance gaps. Data also revealed that certain teaching techniques were more effective, leading a collaborative team of teachers across various subjects (English, Science, Irish, Maths) to test and share different learning techniques, for example '*active recording', 'graphic organisers'* (RS4, AP2), in their classrooms. Based on student feedback, teachers were asked to provide '*key learning outcomes'* (RS4, AP2) and dedicate the first 10 minutes of class to asking questions before summer tests. Data showed that students were struggling with homework, leading to the practical intervention of asking teachers to write homework clearly on the whiteboard rather than just announcing it:

> *'You're calling out the homework as they're going out the door. Some of them will use that as an excuse. Some of them will take it down. Some of them will forget it as soon as they've gone outside the door because they're not capable of taking in the information like that. So that that's something tangible. We did, based on data we saw around homework and the issues that students were having'* (RS4, P).

The principal notes that the school is *'probably not there yet*' in using data to inform changes in classroom teaching practices, indicating a gap between policy aspirations for data-informed instruction and current practice. There is a desire to achieve culture change, where *'middle management'* feels that '*senior management'* needs *'to push'* departmental reviews and utilise the data analysis provided, suggesting partial implementation of the Assessment Policy (2024) expectations (RS4, AP2).

5.6.5. Engagement with teachers regarding progress monitoring

The research site implemented a slow, phased rollout of Athena Tracker (starting with the academic monitor post holder, then the senior leadership team, then year heads) to ensure buy-in and reduce resistance, reflecting a pragmatic adaptation of Assessment Policy's (2024) expectations for whole-school engagement. The AP2 describes how teachers who used Athena Tracker appreciated it, especially for parent-teacher meetings:

> *'They loved it at the parent-teacher meetings because you could just show, and you could really talk around it. So yeah, again, it is, I think, instead of bombarding people, it has to do, I think if you want them to utilise it, you have to have specific tasks that they have to do'* (RS4, AP2).

Staff support for the academic monitoring systems was deemed important, particularly in managing workload and ensuring usability, highlighting a practical consideration not explicitly addressed in policy but critical for implementation:

> *'But I do also think there needs to be a level of buy-in from staff to be able to say, well, if it's all tracked and it's all there, then it's in black and white, whereas, I suppose, and I suppose these things only come up during assessment time that it's like, well, I want to get my test corrected, and I need to get my reports in on Tyro. I don't want to have to be looking at anything else. So, I suppose trying to make it as manageable and the least time consuming'* (RS4, T1).

The academic monitor post holder initially also led a collaborative team of motivated '*strong teachers'* who volunteered to test teaching techniques and share findings. This year, the year heads have been formally integrated into the monitoring team, meeting a cohort of 10-15 students and inputting notes on Athena Tracker. This was initially met with resistance but was '*sold*' as an opportunity to have positive, helpful conversations rather than disciplinary ones (RS4, AP2).

5.6.6. Engagement with students regarding progress monitoring

According to the academic monitor post holder, students are *'very involved'* (RS4, AP2) in the process of monitoring their own progress. This aligns with the Assessment Policy (2024) requirement that students actively track and reflect on their performance. Students engage primarily through individual meetings and classroom activities where they review their data and set targets for improvement, mirroring policy expectations for student self-monitoring and goal setting. The principal describes the impact of using visual data directly with students:

> *'We turn the laptop to the student, and we say, there's the line according to your aptitude test of where you should be, and that's where you are... that evidence has made the conversations we've had with students far more impactful'* (RS4, P).

Students generally appreciate the process, feeling recognised and having a '*voice'* in their study methods. In PE (Physical Education) class, students develop *'self-awareness'* (RS4, T1) by comparing their data against norms, reflecting the policy-supported use of Athena FitnessMark to encourage self-regulation and motivation.

5.6.7. Engagement with parents regarding progress monitoring

Parents of second, third, fifth and sixth year students receive a copy of the Athena Tracker report and an explanation of the data after the summer examinations, aligning with the Assessment Policy (2024) requirement for transparent digital reporting. This colour-coded

report indicates students' performance relative to expected targets. The principal reported that parents provided positive feedback indicating they were '*delighted'* (RS4, P) to receive such detailed feedback, confirming effective implementation of policy intentions. This data facilitates more meaningful conversations between parents and students, moving beyond '*vague*' (RS4, P) explanations, supporting the Assessment Policy (2024) goal of strengthening home-school communication. Parent information meetings and Parent Association meetings are also utilised to provide information about the data collection process and its purpose. Parent-teacher meetings are used to share data insights, with plans to introduce the use of Athena Tracker data during these meetings. As one of the teachers describes:

> *'I would be very happy to show the data at parent-teacher meetings... when you're showing bar charts, or they're showing like dips or graphs; It's easy to see positives as well as maybe areas for improvement'* (RS4, T2)

5.7. Research site five

5.7.1. School profile

TABLE 14. RESEARCH SITE FIVE (RS5)

Category	Post-Primary
Enrolment Female	350
Enrolment Male	455
DEIS	No
School Fee Status	Non-Fee-Paying
Ethos	Inter-Denominational
Teachers	70
SNAs	9.5

5.7.2. Monitoring of student progress and development in practice

This school utilises a structured, yet evolving, approach to monitoring student progress and development, closely aligned with school self-evaluation processes and underpinned by a

clearly holistic ethos evident in both policy and practice. The school emphasises nurturing the '*whole child',* prioritising positive relationships and a welcoming environment:

> *Our school isn't really a school where the academics are at the forefront. The school is very much a school that nurtures the whole child, and all the different aspects that this entails so, kind of, the idea of like school being a positive welcoming place, and the relationships between students and teachers are at the forefront'* (RS5, AP2).
>
> *'I just had the parents of the incoming first years there. And that really is an indicator of where we sit as a school. And the talk, I would say, was 80% social, emotional, behavioural and 20% academic'* (RS5, P).

The emphasis on nurturing the '*whole child*' as described by participants, is directly reflected in formal policy frameworks. The Additional Educational Needs (AEN) Policy (2021) prioritises the 'social, emotional, educational and physical wellbeing' of students, while the school's core values of care, respect, inclusion, equality, justice and fairness provide a coherent foundation for this holistic approach. This alignment between espoused values and enacted practice is further corroborated by external inspection evidence. The WSE-MLL Inspection Report (2016) identifies the 'very good' standard of care within the school and commends its restorative approach to behaviour management, indicating consistency between policy intent, practitioner experience and inspectorate evaluation.

Yet the school is also focused on improving academic outcomes:

> *'I think it was 2022, 2023. And that's when the academic tracking team just started to become part of the school self-evaluation process'* (RS5, AP2).

The school has developed an Academic Tracking Team, led by a teacher competent in data management who has an assistant principal 2 post and supported by another teacher whose assistant principal 2 role is *'to implement actions around the data'* (RS5, P). One assistant principal 2 post holder analyses the attainment results using a Microsoft Excel spreadsheet and the other assistant principal 2 post holder has a responsibility to engage with students, parents and staff members. A central tenant of this progress monitoring is the identification of High

Academic Potential (HAP) students. Students must score above the 85th percentile in their CAT4 entrance tests and achieve over 90% in their core subjects (English, Maths or Science) in their Christmas examinations. The key aim of academic monitoring is to ensure students achieve their best possible attainment outcomes:

> '*And the other goals, obviously, I think, are the same as many schools which is to ensure that our students are getting the best possible results that they can, so supporting students in achieving what they are capable of and what we'd like to see them getting*' (RS5, AP2).

It specifically seeks to identify and support students who show *'high ability'* but may be underperforming (RS5, AP2).

5.7.3. Role of technology in monitoring student progress and development

Technology supports data collection and analysis in this research site, although teachers rely on a combination of digital systems and personal record-keeping. The school utilises the management information system VSware to collect '*term results and commentar*y' from teachers (RS5, AP2). However, VSware requires teachers to '*actively look'* for information, often scrolling through individual student profiles to view academic history, making class-level tracking challenging within the system itself (RS5, T3). To create actionable insights, data is extracted from VSware and processed using Microsoft Excel spreadsheets. The principal in RS5, for example, considers the AP2 school leader who oversees their academic monitoring data, as '*better than Athena'* because of his skills in critical interpretation*:*

> *'He's brilliant because he's keeping a human eye on all of the stats that are coming in, and he sees trends emerging. He can talk to us about it. He's fantastic now, and he then works with another lady who gets that information and puts actions behind it'* (RS5, P).

The system uses colour coding to track, monitor and identify trends across large groups of students over time. An important challenge is the reliance on the '*unique skillset'* of the dedicated staff member who built the complex Microsoft Excel tracking system, positing a risk

if they were to leave (RS5, P). Notably, neither VSware nor the centralised Excel system captures ongoing formative or end-of-unit class test progressions. Instead, teachers continue to rely on personal record-keeping systems, most notably handwritten record books, described by one participant as follows*: 'The notebook is the Bible'* (RS5, T2).

5.7.4. Data-informed decision-making

Progress monitoring data gathered in this school informs decisions at management, departmental and classroom levels, with an increasing degree of formalisation evident in policy documentation and leadership structures. The Academic Tracking Team, identified in the research findings as emerging through the school self-evaluation process, has been formally embedded within the Teaching, Learning, Assessment and Reporting Policy (2026). Its role lies in monitoring attainment at whole-school level and disseminating data to subject departments reflecting a growing institutionalisation of data-informed practice. This development reflects continuity with earlier inspection findings, where the WSE-MLL Inspection Report (2016) noted the following:

> 'The quality of learning and student achievement is monitored through an analysis of student attainment in the certificate examinations compared to national norms and yearly standardised tests. The comprehensive nature of this analysis contributes to the making of data-informed decisions at whole-school level and is very valuable' (WSE-MLL Inspection Report, RS5, 2016).

The findings indicate an important data-informed decision made in the school was the move of the English department away from streaming towards mixed-ability Junior Cycle classes. This development, based on analysis of state examinations illustrating low uptake of higher-level examinations compared with the national average, has evidently resulted in an increased number of students attempting and succeeding at the higher-level English paper. This is described by one of the teachers in the focus group as follows:

> *'We moved away from that, and what we did is we just kept all English students in the same class, so there is no more streaming into higher in the classes, and I think what that did for me specifically was I didn't label the students as just, say, I know it's… I don't know how this is going to sound, but, like, as an ordinary level student, in my head…And put them on that track. I sort of just, you know, had a blank slate and said, you know, we're all able to do the higher exam. So, I think it allowed me to push more students on that way'* (RS5, T3).

A central component of this progress monitoring is the identification of High Academic Potential (HAP) students. The use of CAT4 scores, particularly those above the 85th percentile, as a benchmark for identifying students with high academic potential aligns with the Teaching and Learning Policy (2026), which explicitly references this student cohort. The principal recognises that it is not enough to simply identify students:

> *'But once we do identify them, the two key questions are, are they getting the correct support? And are they being challenged appropriately? So, they're the two, kind of, themes that we work on' (RS5, P).*

Data is used to identify students for external enrichment opportunities, such as the Centre for Talented Youth Ireland (CTYI) scholarships, a process that involves reviewing numerical data along with qualitative input from year heads. This demonstrates coherence between policy and practice in recognising both underachievement and high potential, while also reinforcing the school's dual focus on support and challenge as key drivers of student attainment.

5.7.5. Engagement with teachers

Professional development on data interpretation and application is predominantly conducted informally through staff meetings, where data is presented and explained. Collaboration occurs in subject department meetings where teachers review state examination results against national averages to evaluate performance. Teachers in this school receive a list of HAP students and CAT4 results at the end of the year and before parent-teacher meetings. The Special Needs Assistants in this research site are identified as high valuable stakeholders who

internalise the data they receive, possess deep knowledge of AEN conditions, and develop strong relationships, although they are sometimes underutilised by teachers:

> *'They are absolutely an invaluable teaching tool in the classroom like they know not only the student that they're assigned to, but they know all the students in the class and their role that they play in supporting the challenge, the correct challenge of the child cannot be understated'* (RS5, P).

5.7.6. Engagement with students

Teachers encourage students to engage in reflective practice in assessing their efforts, strengths and targets after receiving results. Older students from third to sixth year are actively involved in the monitoring process by attending parent-teacher meetings and engaging in one-on-one student-teacher feedback sessions following significant assessments:

> *And we go through verbal feedback, and then they need to make a note of where to… where to work on it, and what they did well. That works as well. They don't tend to read your feedback sometimes. It's better when you have that conversation.* (RS5, T1).

Participants from RS5 also describe their attempt to bring '*student reflective tools into classroom practice'* (RS5, P):

> *'The plan is to have space for reflection. So, you get your results back. You think about how you got it, what effort you put in, you know, where are the areas of strength, where the areas you need to work on. How does this compare to previous results? And where are you aiming to go? So, the idea of very reflective practice. It happens in a lot of classrooms already, like'* (RS5, AP2).

5.7.7. Engagement with parents

Parents are kept informed that testing and data collection occur. In particular, parents of HAP students receive a letter detailing their child's potential, encouraging them to discuss this with their child's teachers. Teachers report that parents appreciate the in-depth data and insights shared by teachers at meetings:

> *'They love to know that it's not just the summer and Christmas results, that you're actually there going, oh, well, you know, you have the proof to back up what you're saying. It's not just random thoughts, and they like to see that you have that information, that you're… that you're assessing on a regular basis*' (RS5, T2).

5.8. Research site six

5.8.1. School profile

TABLE 15. RESEARCH SITE SIX (RS6)

Category	Post-Primary
Enrolment Female	635
Enrolment Male	718
DEIS	Yes
School Fee Status	Non-Fee-Paying
Ethos	Inter-Denominational
Teachers	110
SNAs	13

5.8.2. Monitoring of student progress and development in practice

RS6 is a large, urban DEIS school. Monitoring of student progress and development is described as both formal and informal, focusing on both academic attainment and holistic development, especially in relation to both subject planning and DEIS planning. The focus of the school is described by an assistant principal 1 whose role involves being the DEIS Co-ordinator (DC), as follows:

> *'Well, I think the focus in our school is on the holistic development of the student, and it's about the child's wellbeing, first and foremost, because if the child isn't… doesn't have a sense of purpose, belonging, or even any kind of relationship with anyone in school, they're not going to come in. And if you can't get them in, you can't get them in a seat, and if you can't get them sitting down, they can't learn'* (RS6, DC).

While the school tracks results using term reports via VSware, there is no single centralised system that comprehensively tracks a student's progress encompassing all data points like standardised assessments, end-of-term assessments and state examinations. The DEIS co-

ordinator described the monitoring of student progress as being '*fundamental to our DEIS plan'* where student progress is monitored continuously (RS6, DC):

> 'We *monitor out students' progress all the way along with our DEIS plan. We set targets for attainment and when we say attainment, we actually mean progress*' (RS6, DC).

This emphasis is strongly corroborated by the school's DEIS Strategic Plan (2025–2028), which outlines specific, measurable, and data-driven targets for attainment, literacy, and numeracy, demonstrating that monitoring is embedded at a strategic level. Furthermore, this reflects a clear progression from the WSE-MLL Inspection Report (2011), which recommended that the Board of Management assume a greater leadership role in DEIS planning; the current structured and target-driven approach indicates that this recommendation has been enacted. The WSE-MLL Inspection Report (2011) also recommended the following:

> *'It is recommended that clear procedures for recording and monitoring students' effort and achievement be developed for all subject areas. Records should then be used to inform planning for teaching and learning'* (WSE-MLL Inspection Report, RS6, 2011).

Monitoring starts when students enter the school using CAT4 assessments and is followed by literacy and numeracy testing in first year. While RS6 tracks results through the use of term reports via VSware, this is partially addressed through the school's technological infrastructure, as outlined in the AEN Policy (2023), which confirms that key data such as AEN registers and student support plans are centrally maintained on SharePoint and VSware. However, despite these systems, a fully integrated, holistic tracking system combining all data points in one location is not yet evident. The DEIS co-ordinator would like to have one centralised system to house the data derived from monitoring student progress and development:

> '*I would like to have one centralised system that would be used, but you would need… I think there you have the issue not only of having the system, it would have to be, accessible to all, and it would have to be used by all'* (RS6, DC).

5.8.3. Role of technology in monitoring student progress and development

This research site utilises several technological tools for data management, but experiences varied success and engagement, according to the principal and DEIS co-ordinator. VSware is primarily used to share term reports of progress and attainment with parents, monitor student attendance and share information on additional educational needs (AEN) with teachers. This aligns with both the AEN Policy (2023), which identifies VSware and SharePoint as key platforms for maintaining student data, and addresses recommendations from the WSE-MLL Inspection Report (2011), which highlights the need to reduce the time-consuming nature of manual attendance recording; VSware is now used for accurate daily roll taking.

The school utilises Microsoft SharePoint as a central location for data and planning documents, including student support plans and EAL testing results, with all staff having access and receiving training on its use. The AEN Policy (2023) further confirms that SNAs contribute to this system by maintaining daily records on student files via SharePoint, reinforcing a whole-school approach to data management. Attainment data from State Examinations are downloaded and analysed using Excel spreadsheets, using search functions to enable the DEIS co-ordinator to count criteria like higher-level uptake. The DEIS co-ordinator finds OneNote '*undoubtedly fantastic'* for monitoring individual students' progress. She requires students to photograph their tests onto OneNote, corrects them digitally, and parents can view five years of corrected tests and feedback during parent-teacher meetings:

> '*We share our results, and then, some people, very few, and I would be one of them, where I photograph every test, onto OneNote, and I correct them online, so that if a student is in my class for five years, they have five years' worth of tests available for inspection by them'* (RS6, DC).

There is significant variation in staff uptake regarding Microsoft Teams and technology with the DEIS co-ordinator reporting that some teachers still use traditional methods, others use Teams/OneNote:

> *'A number of teachers have just flat-out refused to use it. A number of teachers say they're using it, but they're not really... and you can't make people do what they don't want to do'* (RS6, DC).

This highlights a gap between policy expectations and practice, as the AEN Policy (2023) outlines staff responsibility to engage with CPD and digital systems.

5.8.4. Data-informed decision-making

The principal describes data gathered regarding student progress and development as '*fundamental'* to the DEIS plan (RS6, P). The principal describes how the school analyses attainment results yearly, comparing percentages of higher-level and ordinary-level uptake, comparing Leaving Certificate results to Junior Cycle results, and discussing this information with year heads to adjust future targets. This data-informed decision-making occurs at subject department level as described by a teacher in the focus group:

> *'Like, if a subject department looks and sees, we had, you know, 5% of our, or 10%, of our cohort got distinctions at ordinary level. They can maybe explore, then, should we have moved those into higher level'* (RS6, T3).

The principal believes that the DEIS plan, informed by monitoring data, improves student outcomes because the measures are geared towards student needs.

> *'You're looking at it through the attendance lens which is really tied into outcomes. You're looking at it through the attainment lens. You're looking at it through the literacy and numeracy lens as well'* (RS6, P).

This practice aligns directly with the DEIS Strategic Plan (2025-2028), which establishes measurable attainment targets (e.g. increased higher-level uptake), demonstrating a structured and evidence-based approach to school improvement.

5.8.5. Engagement with teachers

All teachers have a shared responsibility for DEIS planning and subject department planning. Collaboration among staff around monitoring data is limited, however, due to lack of time to meet and resistance from teachers who view DEIS involvement as '*extra work'* (RS6, DC). The DEIS co-ordinator reports how she struggles to secure cover for meetings and often relies on holding meetings in staff free time:

> *'People don't like doing DEIS in this school. They see it as being extra work for them'* (RS6, DC).

Communication between staff primarily occurs through emails, which has been described by the DC as:

> '*so tedious, because there could be a morning here where I get 10 or 15 emails, and to be quite honest, I look at the title and I go, that's not relevant to me*' (RS6, DC).

Information dissemination also occurs during staff meetings, but the principal reports that teachers may find long reports '*boring*' (RS6, P).

> *'It's the kind of scenario; you can bring a horse to water. But you can't make them drink. So, you ask them to read all this documentation. They ask you not to take up the staff meeting with all these long, boring reports'* (RS6, P).

While the findings indicate an absence of structured professional learning in data literacy, although teachers in the focus group were open to such learning:

> *'I think it's interesting what you say there, too, because we're all coming as different teachers with different skill sets and areas of, you know, it might be an art teacher or a French teacher. Maybe it's something that schools or we should look at, you know, here's a set of data, what can… what can we deduce from this? Or how would we go about evaluating it, or how do you evaluate it?' (RS6, T2).*

The DEIS co-ordinator notes, however, that training provided on systems like Microsoft Teams and OneNote often results in poor uptake, despite being highly beneficial once used.

5.8.6. Engagement with students

Students set targets for all major examinations using a mixture of test cover sheets and the digital platform Microsoft OneNote using their phones, depending on the teacher:

> '*Five minutes at the end of every test, every test, take out your phone, tell them how to do it, where to go, what to open up, what to press, how to do it. Very tedious at the beginning when they're not used to it, but they get very, very used to it very quickly'* (RS6, DC).

A teacher in the focus group describes target-setting as reflection:

> *'Certain teachers... might ask them the little question before the test... what grade do you expect to get? What grade would you like to get? ... Hopefully they themselves then can see that correlation between the time spent studying and the grade'* (RS6, T1).

The DEIS co-ordinator describes how the school is working to formalise this through whole-school student self-reflection methods, and gives the example of her own subject department, the Maths department, which links test questions to specific concepts, allowing students to assess their performance on each concept. This is supported by both the AEN Policy (2023), which states that students have input into their learning targets, and the DEIS Strategic Plan (2025-2028), which includes actions for students to self-assess their literacy and numeracy confidence.

5.8.7. Engagement with parents

Formal attainment data is shared with parents through term reports on VSware. The principal describes how a summary of the DEIS report is also sent to parents. She describes how the school consults with focus groups of parents, including the Parents Association, in a collaborative manner. This aligns with the AEN Policy (2023), which identifies multiple communication channels, including VSware and annual parent-teacher meetings. Teacher 1 describes the use of notebooks and digital systems during parent teacher meetings:

> *'I'd use Excel, I would have my results on Excel, but it definitely… I mean, you'd know from looking around, it really alternates, doesn't it? Like, some are reporting from notebooks, some are Excel sheets. Hopefully nobody's sitting there with just… With nothing in front'* (RS6, T1).

Furthermore, the DEIS Strategic Plan (2025-2026) sets a clear target of increasing parental attendance at meetings to 80% by 2028, indicating a strategic effort to strengthen parental engagement, although evidence suggests that communication remains largely dependent on VSware reporting.

5.9. Research site seven

5.9.1. School Profile

TABLE 16. RESEARCH SITE SEVEN (RS7)

Category	Post-Primary
Enrolment Female	601
Enrolment Male	0
DEIS	No
School Fee Status	Non-Fee-Paying
Ethos	Catholic
Teachers	52
SNAs	4

5.9.2. Monitoring of student progress and development in practice

This school implements both formal and informal monitoring practices, with some tension between policy expectations and practice. Monitoring of personal, social and physical development is primarily carried out in an informal manner. The principal explicitly states satisfaction with this informal approach, believing not everything needs to be '*formalised and processed'* (RS7, P):

> *'This isn't 1984, we're not police. We're not monitoring everything you do... We need to be very careful of not being intrusive, but also not being overly nannying, because I think we have a key responsibility that we've lost sight of... a responsibility to let them take responsibility for themselves that we're not... lawn mowers or helicopter teachers'* (RS7, P).

This stance its somewhat in tension with the school's SEN (2025) and Assessment (2016) policies which advocate for structured, co-ordinated monitoring systems. This research site employs an effective pastoral care system involving teachers, class tutors, year heads, the guidance counsellor, and a student support team, aligning with policy emphasis on holistic student development despite limited formalisation. Key academic monitoring points revolve around formal, reported assessments, including Christmas examinations, mock Leaving Certificate and Junior Cycle examinations and end-of-year examinations.

5.9.3. Role of technology in monitoring student progress and development

This school utilises VSware as its management information system and Athena Tracker to support monitoring of academic progress, which reflects Assessment Policy (2016) intentions to establish baseline data and support school self-evaluation though digital systems. Athena Tracker software is used to analyse end-of-term assessment results for all year groups in November and May. Mock examination results for third and sixth year students are also analysed. This analysis compares student performance with expected achievement levels, generated from CAT4 results and Junior Cycle examination results. Athena Tracker software is considered by the principal as *'moderately useful'* (RS7, P), but its predictive value is limited because it relies heavily on non-standardised tests and lacks sufficient standardised data points, falling short of the aspirations outlined in the Assessment Policy (2016) for robust baseline data and reliable whole-school frameworks. The principal prefers performing deeper data analysis himself using Excel spreadsheets, using data downloaded from VSware, due to his background in programming and data system design. Teachers find Athena Tracker useful for displaying assessment results clearly and objectively to students and parents, supporting setting realistic targets, as one teacher asserts:

> *'I always think about when you're just presenting data and no opinion. It's hard to argue with'* (RS7, T1).

The principal strongly criticises the Irish system for failing to provide the tools and software necessary for effective data analysis, contrasting it with systems used in Northern Ireland which provide immediate, comprehensive analysis and correlations:

> *'It would do a really good analysis of the data and draw correlations and do all of that on the push of a button. The department here provided us with none of that. They expect schools to do this, but don't give them any tools to do it, and I mean even to the extent… so, for example, we, purely because we used to do it ourselves, using spreadsheets there for a long time, then Athena came along, and we said, feck it for the sake of a few hundred quid'* (RS7, P).

The lack of government-provided tools means the school must purchase what the principal describes as '*fairly rudimentary'* systems like Athena Tracker, which he acknowledges some schools cannot afford (RS7, P).

5.9.4. Data-informed decision-making

The effectiveness and application of student monitoring data vary across different contexts within this research site. The use of assessment data to inform teaching and learning is largely down to the professional judgement and reflection of individual teachers. Teachers reported analysing class test results to identify topics where students struggled and decided to revisit the material or adjust the order of teaching units in the following year:

> *'We did exactly that in first year science, because we're always rushing. We never get digestion finished. We're always rushing and its crap, and they never learn it. So, we've taken it out of that order, put it somewhere else'* (RS7, T1).

This example supports the Assessment Policy's (2016) intention that assessment information should shape teaching and learning, demonstrating that policy is enacted at an individual teacher level. The principal doubts that the analysis of state examinations informs teaching practices because the data is not considered good enough. This position does not fully align with the Assessment Policy's (2016) expectation that such data informs teaching and aligns with the WSE-MML (2020) recommendation for more consistent whole-school practices in formative assessment and instructional response.

5.9.5. Engagement with teachers

An assistant principal 1 has the formal role of academic monitoring, which involves uploading all data onto the Athena Tracker, checking new staff details, and generally maintaining the system. She attempts to support staff by uploading results, sending emails, and providing short informational videos about Athena Tracker. She agrees that monitoring tools do not necessarily have a significant effect on informing core teaching strategies, noting that flexibility is limited by curriculum requirements. The school is planning a hands-on '*training day'*, allowing staff to use the Athena Tracker software with their own students' data, which is anticipated to improve uptake and comfort levels (RS7, AP1). Formal collaboration around monitoring data is limited to departmental meetings where state examination results are discussed. Informal collaboration is considered highly valuable where teachers find that talking to colleagues about a student provides crucial '*human insights'* that data systems cannot offer (RS7, T1). The assistant principal 1 describes the 'bottom-up' adoption of monitoring technology:

> *'We'd have a lot of, as I call them now, younger teachers... they'd be used to the technology... it's coming from the bottom up, like we're... the younger teachers. They love a bit of... interaction, and they might... spread the word within their own subject department'* (RS7, AP1).

While SEN (2025) and Assessment (2016) policies commit to staff CPD and data use, the research findings highlight a gap in data literacy across the school. The principal identifies a systemic challenge as the lack of data literacy within the Irish educational system, including among the inspectorate and many teachers, which hinders the effective interpretation and application of monitoring data:

> *'I think a big issue with the inspectorate is they're not particularly data literate. I don't have a huge amount of respect for the inspectorate in relation to their approach towards data. Because, and this, in fairness, isn't just limited to them. Within the Irish system, in general, we have a poor, a poor standard of data literacy and data use, and I wouldn't put myself out of that either'* (RS7, P).

This perspective challenges the authoritative evaluative stance presented in the WSE-MLL Inspection Report (2020), as the principal implicitly questions the inspectorate's capacity to meaningfully assess data practices. While the principal foregrounds limitations in data literacy, the inspection report adopts a more prescriptive and developmental tone stating:

> 'There is a recognition at school management level of the need to use attainment data more systematically to assist students to reach their full potential. With this in mind, and with the increasing variety of data sources emerging through SSE and the continued implementation of Junior Cycle, it is timely that a school-wide formal system for tracking student outcomes be progressed and implemented' (WSE-MLL Inspection Report, RS7, 2020).

Resistance among staff in this school is low primarily because the use of the digital monitoring systems is encouraged not mandated. The principal, however, notes that resistance has been encountered in other schools when mandatory systems involve excessive data input, reinforcing a preference for flexible, low burden systems:

> *'That principal encountered a lot of resistance there, and a lot of hassle, because it was something that everybody was being made to do. And personally, I didn't necessarily see the value because I've seen a lot of work and a lot of hassle and a lot of aggro. But really what you were getting out of Athena wasn't much better than what you already had' (RS7, P).*

5.9.6. Engagement with students

Students in RS7 do not have direct access to their data from Athena Tracker although the AP1 notes:

> *'I do see a point where it would be very good to have students involved in looking at their data'* (RS7, AP1).

Instead, students are involved in monitoring their progress primarily '*at teacher level'* through '*assessment for learning'* practices and target setting activities implemented by individual teachers (RS7, P). Teachers find this beneficial as sometimes students do not have an accurate picture of their results where students can overestimate or underestimate their performance and potential:

> *'You think they know their own results, but it's amazing, like, they have a very different view'* (RS7, T1).

The guidance counsellor meets with students to discuss subject choice and college course points and provide students with a realistic understanding of their current attainment versus their aspirations. The AP1 believes access to the visual provided by Athena Tracker would:

> *'Create a bit of realism there, and also with the subject choice, you know, where pupils were able to see actually, my abilities seem to lie in these areas rather than maybe what I thought'* (RS7, AP1).

This would also support the Assessment Policy (2016) aim 'to develop each student's ability to self-monitor' and the Homework Policy's (2025) emphasis on student responsibility.

5.9.7. Engagement with parents

Parents are most directly engaged with monitoring data during one-on-one parent-teacher or year head meetings. Teachers and year heads sometimes use data from Athena Tracker or VSware in these settings to substantiate advice or address performance issues:

> *'I might reference it and show them at a parent teacher, usually, but I might only do that for two or three students'* (RS7, T1).

However, the selective use of data in meetings suggests that systematic parent engagement with data remains somewhat limited in practice. One of the participants in the focus group describes using technology to manage stakeholder expectations:

> '*When you're dealing with parents... Athena is great to put their daughter into perspective, because some parents are so incredibly unreal'* (RS7, T2).

5.10. Research site eight

5.10.1. School Profile

TABLE 17. RESEARCH SITE EIGHT (RS8)

Category	Post-Primary

Enrolment Female	286
Enrolment Male	386
DEIS	Yes
School Fee Status	Non-Fee-Paying
Ethos	Multi Denominational
Teachers	56
SNAs	9.5

5.10.2. Monitoring of student progress and development in practice

RS8 is a rural, DEIS school. This school employs a varied approach to the monitoring of student progress and development, incorporating academic, social, personal and, to a limited extent, physical development. The school has developed a formalised system for academic monitoring, referred to as *'academic tracking*', which is further supported by whole-school assessment policy provisions. This system captures student results from Christmas and summer exams for all students from first to sixth year.

The school also places a significant emphasis on monitoring attendance, as this was flagged as an area needing attention during a whole school inspection. This emphasis is consistent with inspection findings which identified absenteeism as a serious cause for concern, reinforcing the school's view of a clear correlation between attendance and attainment.

> *'So, we'd look at academic tracking. We've developed our own system to track our students academically. A big area we'd look at is attendance. So, we do a lot of monitoring when it comes to attendance. Actually, like we had a whole school inspection, and attendance was kind of flagged as part of an issue that we need to look at'* (RS8, DP).

The primary monitoring process involves the identification of students needing support, followed by one-to-one interviews conducted by year heads and senior management

(principals/deputy principals). These interviews reflect a holistic monitoring approach, enabling staff to identify underlying social, emotional, and contextual factors impacting academic performance. The information from these interviews is recorded in the student support file on Microsoft OneNote:

> *'The student support file is what it's called, and it's everything we do for every student, you know. So, like in fifth and sixth year, we'll have one-to-one interviews, the senior management team will have one-to-one interviews with fifth and sixth years, and that's in there as well'* (RS, DP).

During these meetings, students set specific targets for academic improvement in future assessments. This process aligns with the Assessment Policy (2022), which positions target setting as an integral component of student learning and encourages ongoing review of progress. The overall aim of the academic monitoring system is to look beyond high-achieving or very weak students to the '*middle-of-the-road students*' who might be '*drifting down*' or not fulfilling their potential (RS, 8, AP1):

> *'But I felt that we weren't really getting the middle-of-the-road students who were… who could be doing better. They were getting a bit lost; we knew the really good ones. We knew the really weak ones, and had loads of supports in place for them, but we weren't really… I felt there were students who were drifting down and down, that were kind of, we'd say, going from year to year, and teachers were… they kind of came in as they were dropping, but teachers never noticed because they were on a gradual drop.* (RS8, AP)

5.10.3. Role of technology in monitoring student progress and development

The school uses VSware as its information management systems for recording such data as attendance and assessment results. These assessment results are then imputed into a Microsoft Excel file which operates a traffic light system to quickly identify student status. Participants in the focus group expressed contrasting views on the value of raw attainment data and whether it accurately reflected students' progress. One participant praised the use of colour-coded tracking systems, suggesting that these visual indicators *'hit home*' with students (RS8, T1). In contrast, the other participant offered a markedly different perspective, arguing that raw data

can be misleading when interpreted in isolation. They emphasised that a focus on points and attainment outcomes alone overlooks the *'story behind'* the data including wider social circumstances that influence student performance but remain outside teachers' control (RS8, T2). *'Red'* indicates a significant decrease or failure in multiple subjects, prompting an intervention: *'If there's a few Reds, it's an interview straight away'* (RS 8, DP). The assistant principal 1 with responsibility for updating the Microsoft Excel file recognises the value of the manual data entry and analysis for teacher awareness:

> *'I think that's the best bit about it as well, is that you're really getting a glimpse of the student. You're thinking about the student, you're not just sending it in a system, and it pulls out all this data... you're thinking about, as you're doing it, I'll know all the students'* (RS8, AP1).

This Microsoft Excel file is linked to the broader Microsoft OneNote Student Support File which acts a central whole-school repository for every student which can be accessed by any member of staff. The Microsoft OneNote Student Support File contains a log of actions, behaviour notes, attendance notes, and supports provided. Staff are gradually being directed to use this file first if they have concerns about a student:

> *'If there's issues with students, I'll direct them straight to that. And it's actually now starting to spread throughout the staff that this is where I go, if I want to. If I'm concerned about a student in my class' (RS8, DP).*

This comprehensive system has been externally validated, with inspection evidence commending the quality of support structures in place.

5.10.4. Data-informed decision-making

The data derived from the monitoring of student progress and development is predominantly used for intervention and strategic planning at senior management level. The traffic light system flags students needing intervention, prompting staff to '*dig down deeper*' to uncover social or personal issues (RS8, DP). This reinforces the school's holistic approach to student

care, which is also recognised in inspection findings highlighting the high quality of student support**:**

> *'And then the main reason we use it is for an intervention. So right, okay, what's happening here? And then we dig down deeper. The academic might be affected by social, or might be affected by something at home, or might be affected with a friendship issue or so on, then the restorative stuff that we run in our school, that kicks in'* (RS8, DP).

The data derived from academic monitoring also dictates crucial operational decisions, including the allocation of SEN hours, such as determining where resources like team teaching are required:

> *'If there is an extra English teacher in 1A and 1A is fine. Okay, after Christmas we're going to capture some data and see right? 1A is fine. We need to move you to 1B or 1C. So, it does dictate a lot when it comes to timetables' (RS8, AP1.*

The data is also used to confirm that resources are not disproportionately allocated only to lower-attaining students:

> *'I think it's…it's, to get the best education for all of them, just all the students we're looking at, and I think what… what we used to get bogged down in is putting so much stuff in place, and it's still put it in place for the weaker students, all your resources will go into them, and then what have we left for the other ones? What have we put into the ones who, equally aren't achieving their potential but aren't on the same level as, let's say, the lesser ones?'* (RS8, AP1).

Academic monitoring data also facilitates senior management to hold staff members accountable and initiate '*hard conversations' if* results indicate underperformance. Conversely, department analysis of results enables teachers to reflect on their own practices and collaboration, which has led to positive changes, such as teachers opting to correct state examination papers to improve their own practice. While data is used to promote accountability and improvement, it also reflects broader school-level expectations for evidence-informed practice. Decisions concerning data-informed actions are made collaboratively through '*roundtable discussions'* at assistant principal meetings to ensure a '*joined up thinking*

approach' (RS8, DP). These decisions often feed into the school's DEIS targets and initiatives (RS8, T1).

5.10.5. Engagement with teachers

While the Microsoft OneNote and Excel systems are accessible to all staff, usage is largely confined to the year heads and the senior management team. Getting teachers to achieve '*full buy-in*' and utilise the data more widely is acknowledged as the next major objective and a significant challenge (RS8, DP, AP1):

> *'We're struggling now to try and get teachers [to use it] at the moment. We're kind of happy at the moment that it's the year heads and senior management team that use the data that's there. I don't know how the hell now we're going to do it. It'd be great if there was some support there from the inspector or from the department to kind of show us how to get full buy-in, you know*' (RS8, DP).

There is evidence of resistance from some staff, often linked to increased workload, or a feeling of being judged:

> *'There is, yeah, I don't think it's, I don't think it's, it's coming from anywhere bad. I think maybe, maybe people are feeling, feel judged more than they ever should. It's for information, not surveillance'* (RS8, T2).

Yet senior management explain that they also use the data to initiate staff conversations:

> *'If there's an underperforming staff member, it's senior management has the data as well... it's not a nice thing to have to do, but you know that's when the hard conversations have to happen. If a teacher is underperforming and results are not up to scratch'* (RS8, DP).

Collaboration around progress monitoring data use is also encouraged by allocating time at staff meetings for departments to analyse state examination results and set targets for improvement; however, this remains inconsistently enacted, largely due to time constraints and competing priorities, highlighting a gap between policy intention and practice (RS8, AP1).

5.10.6. Engagement with students

Students are involved in monitoring their own progress primarily through one-to-one interviews with fifth and sixth year students and the senior management team and guidance counsellors. The deputy principal reports that students often find these meetings '*rewarding*

and really insightful', especially the feeling that someone is investing time in their progress (RS8, DP). This structured engagement reflects the school's emphasis on student engagement and aligns with Assessment Policy (2023) references to active student participation in target setting and review:

> *'And the word spreads amongst the students that you're going sitting down in front of the principal, and he's expecting you. So, we set goals, and you're trying raise standards slightly, bit by bit by bit. And I feel then that if we're doing that with students that it kind of has a knock-on effect with teachers as well, in the school'* (RS 8, DP).

This level of satisfaction among the students is echoed by the assistant principal when she describes the positive feedback that she has received:

> *'I think that because of the positive feedback we get from students about them, that they do take them seriously, and they enjoyed the meetings, and they kind of feel important as well, that, somebody's sitting down and taking the time to talk with me, because they do take a bit of time. I think in that aspect, I think that they do promote an internal satisfaction in the student as well, to kind of, to get on'* (RS8, AP).

This report of positive student feedback further reinforces the effectiveness of these practices, supporting WSE-MLL inspection report findings regarding the high quality of care provided to students (RS8, WSE-MLL Report, 2018).

5.10.7. Engagement with parents

Parents are informed that the school is monitoring student data, and they are engaged when issues arise, typically through '*sit-down'* meetings with senior management and year heads (RS8, DP). While systems for parental engagement are in place, the school acknowledges that further development is needed to enhance transparency, particularly in relation to direct data sharing. The school has not yet established a formal way to open the academic Microsoft Excel file directly to parents, but view sharing academic data with parents as a '*next objective'* (RS8, DP). Nonetheless, reports of parental responses remain positive, reflecting trust in the school's monitoring systems and their role in supporting student progress:

'They're very happy, they're delighted, because they... God, you've done this for our son or daughter... you're really watching them and know what's going on. And a lot of the time, they've noticed stuff as well, especially the parents who are interested' (RS8, AP1).

'It opens the door to the conversation of, why isn't he working, or what is going on at home? It's kind of… it's something to talk… it gives us an opportunity to talk as well' (RS8 AP1).

5.11. Reporting of cross-site findings

This section presents the cross-site findings derived from a comprehensive cross-site analysis which identified seven themes. Thematic analysis enables researchers to uncover key themes and meanings with a text, providing a nuanced understanding (Braun and Clarke, 2022). In this section, each theme is explained and supported by relevant data in various formats including participant quotations and tables. Like the previous section, participants are identified by research site number, participant number and role identifier.

Themes are presented to the reader as the following:

Theme 1: The reliance on hybrid, customisable technological systems

Theme 2: The challenge of achieving data reliability

Theme 3: Data-informed decision-making for targeted intervention, strategic planning and pedagogical practice

Theme 4: Holistic monitoring as a foundation for progress

Theme 5: Barriers to data effectiveness

Theme 6: Student engagement through transparency and self-reflection

Theme 7: Parental expectations, proactive communication and the appreciation of data-informed care

5.11.1. Research question one: What systems are in place for monitoring of students' progress and development in schools?

The data analysis process constructed one theme to address this research question: The reliance on hybrid, customisable technological systems. The following section will present this theme using selected responses from the participants.

5.11.1.1. Theme one: The reliance on hybrid, customisable technological systems

A key theme emerges in relation to the significant reliance of schools on digital systems for monitoring of student progress and development. However, rather than adopting one system, schools operate hybrid models, often blending commercial software with essential custom tools. The following table identifies the different digital systems used for general information management and digital systems used for monitoring student progress and development across the eight research sites:

TABLE 18. DIGITAL SYSTEMS USED IN EACH SITE

Research Site	Core Management Information System	Academic Monitoring Software	Supportive Additional Digital Tools
RS1	VSware	Athena Tracker	E-portal (former MIS), Custom software (used prior to Athena Tracker), Microsoft Forms (for data input to Athena Tracker) CAT4 Portal
RS2	VSware	Athena Tracker	CAT4 Portal
RS3	Compass	Athena Tracker	Microsoft Excel, OneNote, Teams, Microsoft Forms, CAT4 Portal, PASS Portal
RS4	Tyro	Athena Tracker	SchoolWise, Microsoft Excel, FitnessMark, CAT4 Portal
RS5	VSware	Microsoft Excel	Microsoft Excel, CAT4 Portal
RS6	VSware	None	Microsoft Excel, Microsoft SharePoint, OneNote, Microsoft Forms, CAT4 Portal
RS7	VSware	Athena Tracker	Microsoft Excel, CAT4 Portal

RS8	VSware	Microsoft Excel	Microsoft Excel, OneNote, Athena Tracker, CAT4 Portal

The school leaders in each of the eight research sites comment on the reliance on and challenges associated with digital monitoring tools, particularly Athena Tracker and VSware, which are often supplemented by manual or customised systems like Microsoft Excel spreadsheets. Athena Tracker is a core system for academic monitoring, particularly in relating student performance to their predicted potential, based in all research sites on CAT4 results. However, some school leaders commented that Athena Tracker's design focused narrowly on individual potential and lacked functionality for grouping students based on academic performance, necessitating the continued use of other systems for identifying groups of students based on their performance or longitudinal tracking (RS1, AP1, RS2, DP). Even when using sophisticated systems, customised solutions, often led by staff members who have technical skills, are essential for compiling and analysing detailed data. These customised solutions generally use Excel spreadsheets or OneNote files. These manual systems allow for longitudinal tracking across years and inclusion of richer qualitative data like attendance, behaviour logs and actions taken.

5.11.2. Research question two: How are schools using the data collected?

A judicious approach to articulating the data is used to answer this research question, focusing on seven critical themes: the reliance on hybrid, customisable technological systems, the challenge of achieving data reliability, data-informed decision-making for targeted intervention, holistic monitoring as a foundation for progress, barriers to the effectiveness of data use, student engagement and parental involvement. The rationale for focusing on these themes includes the importance participants placed on data reliability and holistic monitoring and the importance of data-informed decision-making in supporting students effectively. To

identify how schools engage teachers, parents and students, it is important to consider barriers that hinder effective data use.

5.11.2.1. Theme two: The challenge of achieving data reliability

5.11.2.1.1. Standardised testing

For monitoring data to be actionable, school leaders and teachers must trust its reliability and validity. Standardised tests are a necessary component for the Athena Tracker data monitoring system, but they are viewed with strong ambivalence by school leaders and teachers due to their inherent limitations. The principal in RS5 describes standardised tests as a '*snapshot'* of a student's performance at a specific moment in time. Teacher 1 in RS1 considers standardised tests as valuable starting points or '*litmus tests'* which are used to identify potential and highlight anomalies.

5.11.2.1.2. Technical limitations and data integrity issues

Evidence for all eight research sites illustrate that the effectiveness of progress monitoring is undermined by a lack of system integration and inconsistent data input. One of the teachers in RS4 noted that their monitoring tool is '*definitely not foolproof'* leading to non-accurate data when teachers have to input results for different assessments to meet the system's requirements (RS4, T2). This is echoed in RS3 where data analysis is hindered when teachers *'haven't put in levels'* correctly, requiring time-consuming checks.

5.11.2.2. Theme three: Data-informed decision-making for targeted intervention, strategic planning and pedagogical practice

A key finding relates to the fact that all seven WSE-MLL inspection reports include recommendations or identify a clear need for schools to monitor and track student performance, achievement or progress. While the specific focus varies by school, ranging from whole-school systems to specific subject departments, each report highlights the importance of data-informed monitoring. School leaders actively employ progress monitoring data to move beyond simple

reporting and toward concrete, data-informed decision-making, particularly relating to resource allocation, student intervention, and school-wide planning.

A primary goal articulated by all schools is the '*early identification of underachievement'* (RS3, P), often by tracking students whose performance has decreased significantly against their baseline potential identified by CAT4 assessments. This data leads to initiating interventions and mentoring programmes to improve student attainment in all eight schools. Conversely, data in all eight research sites is also used to identify and appropriately challenge academically strong students.

Performance data dictates crucial operational decisions in all eight schools, such as ensuring adequate support is given to students with additional educational needs (AEN/SEN). Student progress data analysis, sometimes tracked over multiple years, directly informs significant curriculum and policy decisions such as the introduction of the Leaving Certificate Applied (LCA) programme (RS1). Progress data also influences pedagogical decisions such as differentiation in lessons, developing common assessment practices across subject departments (RS2, RS5), and determining appropriate subject choice and subject levels for students (RS2, RS6, RS7).

5.11.2.3. Theme four: Holistic monitoring as a foundation for progress

Across all research sites, there is a strong thematic emphasis that monitoring must encompass the whole child beyond just academic results, highlighting the importance of pastoral care, wellbeing, and positive relationships. One principal asserts that the school values, such as respect, commitment and kindness '*really trump any mark on a piece of paper'* (RS5, P). The goal in all research sites is about maximising potential, which relies on monitoring the child's wellbeing first, as students need a sense of belonging to learn. Standardised tests, like the CAT4 assessments, are viewed as limited '*snapshots* or indicators of aptitude (RS8, DP), used mainly for identification of needs or potential, rather than sole measures of progress.

5.11.2.4 Theme five: Barriers to data effectiveness

Theme five presents the evidence pertaining to the barriers to effectiveness of data use in relation to the monitoring of student progress and development. To achieve this, findings relating to time constraints, cultural resistance, lack of technical expertise and technical limitations and integrity are elucidated.

5.11.2.4.1. Time constraints and excessive workload

The challenge of time constraints and excessive workload is consistently cited across all eight schools as the most significant barrier to effective data use, often inhibiting the crucial step of translating data into action. A shared frustration expressed across all focus groups related to the systemic nature of this time-related barrier. Senior leaders, assistant principals and teachers were all in agreement regarding the lack of time available to undertake this additional work. As a result, both effective collaboration and the application of data are hindered by what participants describe as '*time poverty'* and the '*grind of a 22-hour contract'* (RS1, T1). While this issue was evident across all contexts, it was notable that RS3, as the only fee-paying school in the sample, had greater access to additional resources in the form of formal leadership positions compared to the other seven research sites. Nevertheless, even within this comparatively better-resourced setting, time is still identified as the '*main challenge for everything in a school context'* (RS3, T2).

5.11.2.4.2. Lack of staff buy-in and cultural resistance

The evidence confirms that a lack of staff buy-in and cultural resistance are persistent barriers to progress monitoring across all eight research sites. The assistant principal in RS1 sees the challenge as building data use '*into our culture'* (RS1, AP1). The deputy principal in RS8 notes that the resistance is often subtle, with staff having a '*short-sighted view'* of results, preferring to blame a '*terrible year group*' instead of engaging in professional reflection (RS 8, DP). Teachers in RS4 agree that staff buy-in is a major challenge to effective use of progress

monitoring data: *'buy-in, you know, you have people who are like, I've done it this way, this way is grand'* (RS4, T1).

5.11.2.4.3. Lack of technical expertise and professional learning in data literacy

The capacity of staff to move from data viewing to sophisticated interpretation and application is hindered by a lack of specialised training and a high reliance on individual expertise. In RS1, for example, teachers in the focus group agree that no training or teacher professional development has been formally offered on monitoring systems in the school setting, meaning teachers must acquire the skills '*intuitively'* (RS1, T1). This can result in gaps in teacher knowledge with this teacher admitting that they '*don't really understand percentiles'* (RS1, T1). The principal in RS7 identifies a '*lack of data literacy'* as a '*serious hindrance'* at a systemic level (RS7, P). Two of the eight assistant principals offer in-house training to their staff with some success.

5.11.2.5. Theme six: Student engagement through self-reflection

While all eight schools focused on actively involving students in the monitoring process, comparative analysis identified a significant finding in that similarities and dissimilarities existed in relation to how schools were requiring students to engage with their data. A common perspective held across all sites related to the importance of students being involved in the process of evaluating their own performance and setting targets for improvement. Once the sites are compared, what is most interesting are the ways in which schools attempt to involve students as active agents in their progress monitoring. In RS1, for example, a pilot programme involved second and fifth year students setting targets in consultation with their subject teachers. The subject teachers then submitted these targets to the assistant principal with responsibility for academic monitoring who inputted them to the academic monitoring software. Currently all year groups have been asked to set targets through a Microsoft Form which might be more time efficient but may miss the opportunity to discuss targets with the

subject teacher. RS2 and RS3 combat this problem by using their form tutor period to allow all students to track their own results and attainment in their school journal. In contrast, the assistant principal in RS4 organises for sixth year students only to meet with her or the year head in order to discuss their results. The assistant principal in RS6 notes that while student self-reflection is a *'big one'* being encouraged all along the DEIS plan, in practice it is happening '*very informally'* (RS 6, DC). Hence, the school is explicitly asking staff to introduce more '*systemised self-reflection tools'* for all students.

5.11.2.6. Theme seven: Parental expectations, proactive communication and the appreciation of data-informed care

The theme of parental expectations, proactive communication and the appreciation of data-informed care identify how schools leverage monitoring systems to manage external expectations, maintain transparency and provide support for students' development.

5.11.2.6.1. Parental expectations

The research findings suggest that parental expectations strongly drive school's use of progress monitoring data, shaping accountability practices and influencing how teachers and school leaders manage performance. The principal in RS1 notes that parent expect the school '*to nurture the knowledge and talent'* of students and provide report cards showing progress. This is echoed in RS3 where the ARR co-ordinator describes *'the level of academic expectation from parents'* as the '*the most challenging aspect'* of his job as teacher. He reports that parents in this fee-paying school '*will demand'* high standards of teaching and success. Monitoring systems are used in this school to demonstrate accountability and reach those higher standards. The deputy principal in RS2 also notes that data assists in realistic conversations with parents whose expectations might be too high for their child's ability.

5.11.2.6.2. Proactive communication

There is evidence of proactive and data-informed communication and reporting with parents in all eight research sites, indicating that data reporting is not ad-hoc but an expected feature

of school practice. Schools employ a range of strategies to share progress monitoring information, with four of the sites using visual data displays during parent-teacher meetings to make student progress accessible for parents. Two of the schools send correspondence to parents by post. RS3 sends letters of commendation to parents of students achieving high levels of success, averaging over 90% in term assessments. RS5 sends letters to parents of students identified with high academic potential (HAP). The deputy principal in RS2 describes how parents were '*grateful'* that the school-initiated contact to discuss underachievement and put an intervention plan in place for their child.

5.11.2.6.3. Data-informed care

There was evidence from all eight research sites to suggest that parents value the non-judgemental nature of monitoring data, especially when it leads to interventions targeting potential problems. The assistant principal in RS1 notes that parents are usually '*delighted*' that underperformance is noticed, and they are impressed that the data makes this vigilance possible. This was echoed by the assistant principal 1 in RS8 when she describes how parents are '*delighted'* that the school is monitoring their child and that the data '*opens the door to the conversation'* about performance issues that may be linked to home.

5.12. Conclusion

This chapter has presented the findings from eight case study sites, highlighting the diverse systems and practices employed by schools to monitor student progress and development. While there was considerable variation in the structures, tools and processes adopted across the schools, several consistent patterns and key issues emerged.

Firstly, formal monitoring systems were predominantly centred on academic attainment, with the widespread use of technological platforms such as VSware and Athena Tracker to support data collection and analysis. However, while these systems enabled more systematic tracking

of student performance, challenges relating to data reliability, technical limitations, and inconsistent engagement among staff were evident. Secondly, the findings indicate that school leaders use data to inform a range of decisions, including targeted interventions, curriculum adjustments and strategic planning. Nevertheless, the extent to which data informed classroom practice varied across sites, with some schools demonstrating more embedded and collaborative approaches than others. Thirdly, the chapter highlighted important considerations regarding stakeholder engagement. While efforts have been made to involve teachers, students and parents in the monitoring process, barriers such as time constraints, varying levels of data literacy, and the increasing reliance on digital systems have influenced the depth and quality of this engagement.

Overall, the findings reveal a complex picture in which schools are increasingly adopting data-informed approaches to monitoring student progress, but continue to encounter practical, cultural and technical challenges in fully realising their potential. These issues, including the balance between academic and holistic monitoring, the reliability and usability of data systems, and the engagement of key stakeholders, will be discussed in relation to the literature reviewed in the following chapter.

Chapter 6: Discussion

6.1. Introduction

This research focuses on the experience of monitoring student progress and development in eight post-primary schools in Ireland. The literature review undertaken in chapter three illuminated the research context and the significance of monitoring student progress and development. A gap in knowledge was identified through synthesis and analysis of the relevant literature, particularly in relation to the systems used by school leaders and how schools were using the data collected by these systems. This gap was especially evident in the Irish post-primary context where there are no studies examining the systems used to monitor student progress and development. Here there is a dearth of empirical literature relating to data-informed approaches to the monitoring of student progress and development and what did exist related to data-informed decision-making broadly, especially related to the enactment of school self-evaluation in primary and post-primary schools in Ireland (Brown, Gardezi, *et al.*, 2021; Brown, McNamara, *et al.*, 2021; Barry *et al.*, 2022; O'Brien and O'Hara, 2026). As such, the research posed two questions to advance knowledge in the field. The first research question seeks to explore what systems are in place for monitoring of students' progress and development in post-primary schools in Ireland. The second research question aims to identify how schools are using the data collected.

To inform answers to these questions, the literature provides a provisional conceptual understanding, which is strengthened through the application of data-informed decision-making theory (Mandinach and Schildkamp, 2021). Subsequently, a multi-site case study was designed and executed with the purpose of providing rich and deep accounts of the practice of monitoring student progress and development in eight post-primary schools in Ireland. Within-site findings from these accounts are presented in chapter five along with a cross-site analysis, through which seven overarching themes were identified. This chapter interprets the research

findings by synthesising the primary themes identified across the eight research sites to provide a comprehensive understanding of digital student progress monitoring. The discussion is structured to first examine the infrastructure of monitoring, specifically the reliance on hybrid, customisable technological systems and the persistent challenges of achieving data reliability through standardised assessments and system integration. Following this, the chapter explores the practical application of these systems, focusing on data-informed decision-making for targeted interventions and the essential role of holistic monitoring in supporting students beyond mere academic results. The analysis then addresses the critical barriers to data effectiveness, including significant time constraints and the necessity for improved staff technical expertise. Finally, the chapter evaluates stakeholder engagement, discussing how student self-reflection and proactive communication with parents evolve monitoring into a transparent framework for data-informed care and accountability.

This chapter summarises and contextualises the key contributions of this thesis in the context of previous research and literature. This study contributes to the literature by providing a multifaceted examination of how schools implement digital student progress monitoring across multiple research sites. This research illustrates the extent to which Irish post-primary schools depend on hybrid and locally configured technological infrastructures to support the monitoring of student progress and holistic development, while revealing persistent challenges in securing the validity, consistency and shared interpretation of data. It traces the evolving role of progress monitoring data within school improvement processes and demonstrates how school leaders use these data to enact data-informed decision-making in contextually responsive ways. The study also identifies structural and cultural constraints that hinder the effective use of data, while also recognising the organisational practices that support meaningful engagement among key stakeholders in the progress monitoring process. Furthermore, this study advances the concept of holistic monitoring by emphasising that the

evaluation of academic performance should be integrated with a sustained focus on student wellbeing and care, to more effectively maximise overall student potential. Finally, this research contributes to the understanding of stakeholder engagement in the literature by demonstrating how data-informed practices are used to manage parental expectations and foster student self-reflection.

6.2. Datafication without infrastructure: The uneven development of digital progress monitoring

6.2.1. Patchwork infrastructures and the local construction of data systems

This study examines the systems used by school leaders to monitor student progress and development in post-primary schools in Ireland. A key finding of this study is that school leaders increasingly rely on hybrid, customisable digital monitoring systems to support data-informed decision-making, particularly in relation to targeted student interventions and curriculum planning. This finding is consistently evidenced across all eight research sites. All eight research sites utilise a core management information system, such as VSware, Tyro or Compass, primarily for monitoring attendance and basic attainment reporting. These systems are supplemented with specialised tools such as Athena Tracker, in five of the eight research sites, enabling alignment of student performance with estimated potential. In addition, three sites reported reliance on bespoke Microsoft Excel or OneNote trackers developed by individual staff members, often based on locally developed expertise. This indicates that, rather than operating within integrated data infrastructures, schools rely on fragmented and locally configured systems to construct a functional overview of student progress.

This finding echoes prior research highlighting the fragmented, 'patchwork' nature of digital systems, in which schools rely on multiple platforms to support administrative management, operational processes, parent communications and the delivery of learning content (Pangrazio, Selwyn and Cumbo, 2023a). However, it also extends this literature by demonstrating how fragmentation in the Irish context is intensified by the absence of a centrally provided,

integrated system. This pattern is further reinforced through assessment policy evidence across seven of the eight research sites, which illustrates that schools are not only relying on multiple platforms such as VSware, Compass, Tyro and Athena Analytics, but are simultaneously developing bespoke tracking systems and institutional roles to manage data processes. For example, the establishment of leadership responsibilities such as an assistant principal for Assessment, Reporting and Recording (ARR), alongside the development of in-house tools for academic tracking, suggests that schools are actively constructing organisational solutions to compensate for the absence of integrated national infrastructure. However, the resources available within the fee-paying school site (RS3) allow for the creation of additional posts of responsibility, enabling the development of highly comprehensive and embedded monitoring systems. This disparity raises important questions regarding the equity of monitoring practices across Irish post-primary schools, particularly in respect to the capacity of different school contexts to implement and sustain such systems.

A further finding relates to the persistence of the 'productivity paradox', where sophisticated systems can yield weak returns on investment because they are underutilised or lack specific functionalities (Drake, 2021, p. 86). This is particularly evident in the reliance on locally developed trackers, which, while effective in generating actional insights, depend heavily on the expertise of individual staff members. While these tools provide the overview required by senior management, they also introduce significant systemic risks. Their development and maintenance often depend entirely on the specialised skillset of a single teacher, creating vulnerabilities in terms of sustainability and continuity. This suggests that system effectiveness is uneven and contingent upon individual capacity rather than organisational infrastructure.

Overall, the findings highlight a significant disconnect between the sophisticated data systems described in the literature and the technological tools currently available within the Irish post-primary sector (Pangrazio, Selwyn and Cumbo, 2023a; Seckin Kapucu *et al.*, 2024). One

school leader contrasts the Irish system with Northern Ireland, where the Department of Education provides integrated software that automatically performs comprehensive analysis, linking student performance across similar subjects and drawing immediate correlations (RS 7, P). In contrast, Irish school leaders report that the Department of Education and Youth expects schools to monitor data but provides no equivalent software or infrastructural support (RS7, P). This expectation is largely inferred by school leaders through requirements to comply with external inspection reports and guidelines, rather than being explicitly articulated in any national policy mandating systematic monitoring of students' progress data. This pattern raises an important issue of data justice within a system that increasingly relies on data to measure learning. Specifically, it suggests that unequal access to technological infrastructure shapes schools' capacity for data processing, interoperability and secure data management. This reflects wider concerns regarding inequalities in digital capacity across school systems (Pangrazio, Duffy and Zomer, 2025).

6.2.2. The institutionalisation of prediction through learning analytics

A key finding of this study is that post-primary schools in Ireland increasingly rely on learning analytics and digital monitoring systems, specifically Athena Tracker, to baseline and forecast student performance. This finding is evident across all eight research sites, where predictive processes primarily utilise CAT4 results, typically administered prior to, or at the point of, entry into first year, to establish a student's predicted potential. This reliance raises important concerns about the reductive nature of such measures, given the well-documented limitations of standardised testing as a proxy for future academic attainment (Lai, 2023; Holler, 2024; Resch, 2024; Teke, Yildirim and Selçuk, 2026). Importantly, cross-site assessment policy analysis indicates that baseline assessment is not used in isolation but is systematically embedded as the foundation for all subsequent monitoring processes. Across the research sites, CAT4 assessments are supplemented by additional standardised measures such as PPAD-E and

Drumcondra tests, creating layered baseline profiles of student ability. These data are actively circulated within schools, for example through shared digital platforms such as Microsoft Teams, ensuring that teachers are expected to engage with and interpret baseline indicators in their everyday classroom practice.

International research has extensively examined the use of learning analytics and educational data mining to predict student performance, often highlighting the complex algorithms incorporating diverse variables such as socio-economic status, study time and prior attainment (Livieris *et al.*, 2019; Seckin Kapucu *et al.*, 2024). However, there remains a notable paucity of research examining how such systems are operationalised within the Irish post-primary context. This study begins to address this gap by demonstrating that, in contrast to these multidimensional international models, the Irish context reflects a more narrowly configured approach to prediction. Specifically, the findings indicate that Athena Tracker relies on standardised assessment, supplemented by summative outcomes, as the primary basis for prediction, rather than integrating a broader range of contextual or behavioural variables within its algorithm to forecast student potential. This reveals a significant divergence between the theoretical potential of learning analytic systems and their practical implementation in schools, and raises important questions about the scope, reliability, and equity of predictive practices currently in use. A further finding is that standardised testing is formally embedded in practice across all eight research sites, where it is used to guide grouping, intervention and expectations. This illustrates that predictive data carries considerable institutional legitimacy, despite acknowledged limitations. This finding supports existing literature that highlights the perceived legitimacy of predictive data, even in light of broader concerns regarding its reliability and potential to constrain student outcomes (Cao and Mai, 2025).

6.2.3. Between algorithmic prediction and professional judgement

While school leaders in this study demonstrate a clear commitment to support students to achieve their potential, Sahlgren (2021) advocates for a more cautious and critically informed approach to learning analytics. Data-driven education and artificial intelligence educational technologies (AIED) are often framed as enabling flexible, inclusive, tailored, engaging and effective teaching and learning, alongside improvements in equity and accountability (Sahlgren, 2021). However, these technologies also introduce considerable risks, including algorithmic bias and inequitable decision-making within high stakes educational contexts already shaped by structural inequalities (Sahlgren, 2021; Baker and Hawn, 2022). These risks arise when predictive systems produce outcomes that disadvantage particular student groups, including along lines of race, gender or socio-economic status (Baker and Hawn, 2022). While these risks are not explicitly identified in this study, a related tension emerges in the findings regarding the use of standardised assessments to predict student performance.

As highlighted by Department of Education policy (Department of Education, 2024a), single standardised test results should not be used as a sole predictor of future achievement; however, such practices are evident when Athena Tracker predicts a student's initial baseline on entry to post-primary school. Despite this, the inspectorate appears to be positively disposed to digital monitoring systems as articulated through its WSE-MLL reports. For example, inspectors have positively acknowledged the introduction of the 'new monitoring and tracking system' in RS7, encouraging senior management to further develop its use. This points to an inconsistent message from the Department of Education and Youth, whereby official policy cautions against overreliance on singular standardised measures, while inspection practices simultaneously appear to endorse data-driven tracking systems that may depend on such measures in practice.

Athena Tracker does not publicly share information about the statistical model it uses, or indeed its accuracy. In some cases, participants perceive these early indicators as highly stable; for

example, one assistant principal (RS3) notes that CAT4 results from sixth class could nearly predict Leaving Certificate outcomes six years later. Yet, the findings also reveal a consistent sense of ambivalence among school leaders and teachers regarding the reliability of such analytics. This was evident across sites as participants openly described standardised assessments such as CAT4 as '*snapshots*' that fail to capture personal factors including anxiety or home circumstances. The literature explicitly supports this view, noting that such assessments reflect performance at a single point in time and do not account for the broader factors influencing attainment (Resch, 2024). Furthermore, evidence suggests that test anxiety and psychological stress may further distort their validity as indicators of true potential (Lai, 2023). A key concern emerging from the findings is that predicted results may act as a '*ceiling*', constraining student ambition. This fear is also echoed in the wider literature's discussion on epistemological erasure which describes the limited ability of standardised testing to measure meaningful learning, leading to a situation where tests may not accurately reflect a student's true abilities or potential (Cunningham, 2019). By neglecting critical thinking, creativity, and practical skills, these systems run the risk of marginalising students whose talents fall outside the narrow metrics of the assessment (Oyeronke and Adeoye, 2024).

The findings further emphasise that '*data is only as good as the person interpreting i*t' (RS5, P). Predictive analytics require careful mediation through professional judgement, as teachers may contextualise fluctuation in performance through knowledge of students' personal circumstance (RS1, AP1, RS7, P). The literature reinforces this perspective, highlighting that data use is inherently interpretive and requires a comprehensive skillset to transform raw data into actionable knowledge (Farrell and Marsh, 2016; Mandinach and Schildkamp, 2021). The research findings of this study indicate a largely coherent picture between established theory and the empirical evidence arising from this research. While learning analytics offers the possibility to use data in efficient ways to improve education, the potential, especially in

schools, is still not realised. This is due to the lack of culture related to school quality assurance and learning analytics, platform limitations, and appropriate capacities among school leaders and teachers (Martínez-Monés *et al.*, 2024). Crucially also, the literature states that a reliance only on test scores is inadequate; teachers require alternative data, such as information on a student's health, motivation and personal circumstances, to properly contextualise performance and behaviour (Mandinach and Schildkamp, 2021).

There is evidence in the findings to suggest that the tools that exist, commercial or otherwise, are described to be of limited value by one principal due to the absence of national standardised data points (RS7, P). A core tension in the findings across all sites relates to the validity of standardised assessments (Souvignier *et al.*, 2021). There is also a tension across all the sites relating to the validity of the results from non-standardised assessments such as term assessments which in only some schools are common assessments prepared by the subject department for all students in a particular year group. Athena Tracker provides a baseline potential percentage grade for each student in each subject. This is a grade it claims a student can achieve based on their own unique capabilities. According to its website, the statistical model utilised by Athena Tracker is currently based on the results of 375,149 students, 19,462,414 exam results and 1,291,582 aptitude test results (*Athena Analytics*, 2026). While digital tools like Athena Tracker are foundational, school leaders view them as mere 'snapshots' and express strong ambivalence as to their true value (RS5, P, RS7, P). Encouragingly, there is evidence of deliberate efforts to position predicted grades act as 'floors', rather than 'ceilings', preventing data from limiting student ambition (RS7, AP1), aligning with established best practice on the use of standardised tests in post primary schools in Ireland (NEPS, 2007; Department of Education, 2024a). Importantly, there is also evidence that suggests that early attainment does not rigidly determine future outcomes, with more than half of performance

variation shaped by dynamic factors including motivation, effort, and teaching quality (Strand, 2006).

Within the broader policy context of evidence-informed decision-making in Irish schools, there is increasing scholarly critique of overreliance on large-scale data and performance metrics (Munoz-Chereau, González and Meyers, 2022). By revealing spurious past correlations between educational variables, it is argued that standardised tests neglect small data, understood as the details that make the difference in schools: how good quality teaching leads to better learning (Munoz-Chereau, González and Meyers, 2022). Despite the proliferation of digital systems, teachers continue to rely heavily on informal, relational and professional forms of knowledge, capturing nuances that structured data cannot (RS6, P, RS7, T2). This finding aligns with existing research which suggests that school-based and formative assessments are much more likely to improve the quality of education because they capture in their narratives the depth and complexity of the details and relationships that matter (Munoz-Chereau, González and Meyers, 2022).

While this finding corroborates existing research, it adds depth to the literature by demonstrating how these processes operate in real-world school settings and are mediated by teacher professional preferences. There is a tension in the literature where it suggests that foregrounding what is measurable and automatable, the form of knowing that is established through direct, relational engagement with individual students is pushed to the background and pedagogical judgement is recontextualised into algorithmic operations (Shi, 2025). Certainly, the findings of this study suggest that the impact of datafication in the classroom appears contingent upon contextual and organisational variables. Despite the move to digital platforms, the traditional physical record book, or ‘bible’ as it was referred to by one teacher (RS5, T2), remains a cornerstone of classroom monitoring. Teachers use these notebooks to record not just raw marks, but qualitative nuances such as whether a student left a particular section of a test

blank or struggled with a specific type of question. Undoubtedly, this finding reflects the complex and situated nature of professional practice with some teachers reporting that they prefer to use their own record book for the immediacy and detail that they provide during parent-teacher meetings over digital systems (RS2, T1, RS5, T1).

6.3. The institutionalisation of data-informed decision-making: Multi-level uses of progress monitoring data

A key finding of this study is that school leaders actively use data derived from progress monitoring for multiple levels of decision-making, including school improvement planning, resource allocation and targeted student interventions. Across the eight research sites, progress monitoring data is used to inform strategic, operational and pedagogical decision-making. This multi-level use of data aligns with inspection frameworks such as the WSE-MLL process, which emphasise the use of evidence to inform whole-school planning, teaching and learning, and student support structures. This section analyses three key developments in the use of progress monitoring data: the increasing openness to data use among teachers, the role of data in supporting students with special educational needs, and the range of internal and external influences shaping how progress monitoring data is used within schools. Overall, the findings suggest that the use of progress monitoring data has undergone significant development in post-primary schools in Ireland, moving toward more embedded and contextually responsive forms of data-informed decision-making. This aligns with international research that positions data use as central to school improvement and organisational effectiveness (Drake, 2021, 2024; Sousa *et al.*, 2021), while also extending Irish research by demonstrating how these practices are enacted at school level. Importantly, the targeted use of progress monitoring data has undergone notable development in post-primary schools in Ireland. This development may be explained by increased policy emphasis on evidence-informed practice, alongside growing expectations for schools to demonstrate accountability and responsiveness to student outcomes.

6.3.1. Developments in the use of progress monitoring data

A key finding of this study is the openness of participants across all eight research sites to using progress monitoring data as a basis for data-informed decision-making. Across the research sites, this openness is evidenced through the translation of monitoring data into actionable knowledge to inform interventions and policy development. This indicates that data-informed practices may be increasingly present within everyday school processes in some contexts, although their degree of embeddedness remains uneven and continues to be shaped by policy expectations, organisational capacity and local practices. A further finding relates to the increasing presence of policies, structures and supports at both a national and local level that require data use in post-primary schools (Young *et al.*, 2018). This suggests that the Department of Education and Youth (DEY) is placing greater expectations on schools to engage with data use, potentially moving Irish post-primary schools closer to jurisdictions where data-informed practices are more established. This pattern may be explained by the gradual normalisation of data use within the Irish policy landscape, particularly through SSE and DEIS planning processes, which have embedded data use into routine school cultures and professional expectations (Young *et al.*, 2018; Department of Education, 2022a).

6.3.2. Beyond standardised metrics: Holistic and policy-driven uses of data in SEN decision-making

The findings across the eight research sites indicate that data is a critical tool used for identifying, supporting and monitoring students with special educational needs (SEN). This reflects the strong emphasis within Irish special educational needs policy on early identification, targeted intervention and ongoing monitoring as central components of inclusive education practice (Department of Education, 2024b). The SEN policies available for analysis in seven of the research sites formalise the use of data for the identification, monitoring and review of students with special educational needs, reflecting the structured policy-driven nature of SEN provision within Irish post-primary schools. The wider literature also recognises that

data are required to monitor student progress, evaluate the impact of interventions, review the effectiveness of policies and processes and plan new initiatives (Ainscow, 2020).

However, the literature cautions against the damaging impact of evaluating effectiveness on the basis of narrow performance indicators (Ainscow, 2020). In line with this caution, the findings indicate that standardised tests are not used in isolation by school leaders or teachers in the eight research sites (Department of Education, 2024b). This is reinforced in school-level policy, where RS4 and RS5 explicitly state that multiple sources of evidence are required to inform decision-making, reflecting Department of Education guidance on holistic assessment practices (Department of Education, 2022a, 2024a). In all eight sites, standardised assessments were employed to provide baseline student data regarding students' underlying reasoning abilities and cognitive potential, inform interventions and evaluate students' progress in relation to their point of entry. The CAT4 assessments, used in all eight schools, provides an objective analysis of each student's ability, including implications for teaching and learning. Other standardised assessments mentioned in the findings include the New Group Reading Test (NGRT), the Post-Primary Assessment and Diagnosis-English (PPAD-E) and the Wechsler Individual Achievement Test, Fourth Edition (WIAT-4). In addition, the research findings indicate that information from attainment tests, teacher observations, the Education Passport from primary school, parent/guardian reports, the student support file, and student voice are all integral components of the assessment process (Department of Education, 2024b). Teachers in one school describe comparing CAT4 scores with literacy tests to help identify students who might have slipped through the cracks in primary school (RS7, T2). They also comment favourably about how the data allows them to see discrepancies between ability and performance; for instance, identify a student who has a strong aptitude in maths but is not progressing due to significant issues with literacy (RS7, T3).

6.3.3. Contextual influences on progress monitoring data use in post-primary schools

School leaders from across the eight research sites identify several distinct sources that shape the monitoring of student progress and development, ranging from external regulatory mandates to parental demands and internal institutional standards. A primary source of expectation comes from the Department of Education and Youth and the Inspectorate. Within the Irish policy context, the increasing emphasis on data-informed decision-making reflects a broader shift towards outcomes-focused school improvement, as articulated in *Looking at Our School* (Department of Education, 2022a). Across the research sites, it was clear that school leaders viewed monitoring progress as a requirement for accountability and quality assurance. This was evident in participant responses and appears to reflect school-level enactment of Department of Education and Youth policy (Department of Education and Youth, 2025a). This interpretation is further reinforced by Whole-School Evaluation reports in seven of the eight sites, which indicate that the use of progress monitoring data across Irish post-primary schools is structured through formal inspection frameworks and expectations regarding evidence-informed practice. These reports highlight how schools are required to generate and utilise data as part of routine quality assurance and improvement processes, implicitly embedding data use within institutional accountability structures. In this context, teachers are expected to collaborate to develop and implement consistent and dependable assessments practices. It is notable that Appendix 3 lists 'Record of student attainment and assessment data' as one of the sources of evidence required within inspection processes in post-primary schools (Department of Education and Youth, 2025a).

Particularly, at research site one, the formal system for monitoring student academic progress and development was directly instigated by a 2013 inspection recommendation to develop an overarching profiling system, thereby directly shaping the emergence of the school's current system. Furthermore, the academic council, identified in the findings as a central structure for

monitoring, is formally embedded within school policy documentation, with the assessment policy designating it as responsible for co-ordinating the profiling system, and the SET policy confirming representation from the special educational needs team. This demonstrates a clear alignment between policy, practice and leadership structures. The introduction of the Leaving Certificate Applied (LCA) programme as a data-informed intervention is further supported by SSE documentation, which confirms its implementation in September 2023 to provide more flexible learning pathways and records successful outcomes for the initial cohort. This provides concrete evidence of how monitoring data is translated into strategic curricular decision-making. In addition, in RS5 and RS6, the formal monitoring of student progress was specifically designed to align with or become part of the school self-evaluation progress. These findings support earlier research and indicate a shift away from an exclusive focus on inputs towards greater attention on learner outcomes, evaluative practice, and evidence-informed leadership, aligning Irish post-primary schools with international trends in educational accountability and improvement (Hawlitschek *et al*., 2024).

The evidence from RS3 illustrates a particularly strong alignment between policy intention and school-level enactment. Formal policies such as the Assessment Policy (2025) and the Raising Academic Achievement Plan (2022-2024) translate directly into operational practices, including structured tracking systems and defined pastoral roles. This suggests that, under certain conditions, policy does not merely influence practice but actively shapes a coherent, school-wide approach to data use. At the level of the case, in the three DEIS schools (RS2, RS6 and RS8), there is an explicit expectation to monitor attainment, attendance and retention as part of the formal DEIS planning and reporting process. This aligns with experiences outlined elsewhere in the Irish post-primary context (Fleming and Harford, 2021) and further triangulates interpretations arising from WSE-MLL reports from the research sites that have DEIS status. In RS2, for example, inspectors note that DEIS action planning was used

effectively to drive improvements in teaching learning but 'monitoring of progress and embedding of whole practices is not as effective' (RS2, WSE-MLL Report, 2019).

The literature argues that the emphasis on students' attainment and standardised educational outcomes ignores the social and cultural diversity of school communities, stigmatising schools serving more disadvantaged communities regardless of context (Munoz-Chereau, González and Meyers, 2022). Indeed, while the Professional Development Service for Teachers (PDST) provided subject analysis spread sheets for state examinations, these tools don't consider students in DEIS schools or students who are not in DEIS schools but are in very inclusive schools with a higher-than-average amount of students who experience special educational needs. To rectify this gap Athena Tracker provides, at an additional cost, a detailed analysis of state examination results, Junior Cycle and Leaving Certificate, compared against the national average in DEIS and non-DEIS schools. However, as the literature notes, for accountability systems to seriously commit to distributional and recognitional dimensions of social justice, standardisation would need to account for schools' context before attempting any meaningful comparisons between schools (Munoz-Chereau, González and Meyers, 2022). This would move the discourse toward the recognition of the challenges encountered and strategies developed by schools working in challenging circumstances to deliver quality education (Munoz-Chereau, González and Meyers, 2022).

Interestingly, in some sites, school leaders report that parents are a more immediate driver of the expectation to monitor student progress than the Department of Education (RS1, RS3). Parents increasingly expect schools to be responsive to individual student needs and provide evidence of progress through regular reporting. This parental expectation is further underscored in the broader literature where parents actively manage and communicate their high academic expectations (Liem *et al.*, 2025). At RS3, a fee-paying school, the school assistant principal 1

identifies parent demand as the most significant source of expectation, noting that parents expect the highest standards of teaching and success because they are paying for the service.

Participants also consistently referred to their own professional standards and the school's mission regarding the expectation to monitor student progress and development. The literature traces the internal commitment to monitoring student progress and development back to foundational pedagogical beliefs (Dewey, 1897). This supports the finding that school leaders view monitoring as a pastoral obligation to truly know the student (RS2, P, RS3, P). A key internal motivator identified in the literature is the psychological impact of teacher support which can create a sense of care (Peker and Cengiz, 2023). This sense of care is shown to increase student self-confidence, hope and academic grit (Peker and Cengiz, 2023). This directly backs up the cross-site finding that the monitoring of student progress and development is viewed as the care of students rather than just administrative tracking.

A recurring theme in the findings is the internal commitment to ensuring that those students who are quietly underachieving are identified early to allow measures to be put in place to support their progress and development (RS1, RS8). All research sites use Microsoft OneNote or SharePoint to store student support plans (SSPs) and logs of actions taken to support students' learning needs. These files are accessible to all staff, ensuring that every teacher can access information on a student's specific needs and the interventions in place. Management information systems also identify students with special educational needs with a symbol (support flag) so that new or substitute teachers can immediately see who requires differentiation in their classrooms. This aligns with the school leaders' desire to ensure that *'nobody slips through the cracks'* (RS1, P).

Studies consistently indicate the central purpose of data use as responsive use, or to meet individual students' needs identified in the data (Lee, Camburn and Sebastian, 2025). School

leaders who prioritise positioning their leadership practices with meeting students' needs incline to seek out inputs that assist them to gain a more valid, comprehensive picture of the challenges of individuals or groups of students (Datnow and Park, 2018; Lee, Camburn and Sebastian, 2025). The literature notes that the move toward individual monitoring is motivated by an internal emphasis on ensuring all children benefit from opportunities to learn (UNICEF, 2021). Both international and national communities have committed to a change that emphasises equity and equality, particularly addressing the needs of marginalised and disadvantaged groups through education planning (UNICEF, 2021).

Professional standards for school leaders explicitly link data use to the school's internal identity. Certainly, in some sites, monitoring is viewed as a pastoral obligation derived from the school's specific ethos, where valuing the individual requires a comprehensive understanding of their progress (RS1, RS7). Monitoring is also considered an essential function for reporting to the Board of Management. School principals are required to present data on attainment trends, Leaving Certificate outcomes, and student engagement to their boards and trustees (RS3, RS5, RS6). This supports earlier findings that indicate that leadership standards assess a principal's ability to use relevant data to develop and promote a school's vision. Furthermore, effective principals are described as having the capacity to create a supportive school culture built on a shared vision, goals, expectations and norms regarding how data is used to support students (Department of Education, 2022a; Drake, 2024).

6.3.4. Strategic, operational and pedagogical decision-making data use as interconnected layers

Effective teachers and school leaders have used data to inform their practice for a long time but the learning theories in which data use is grounded have changed to position data use differently (Mandinach and Schildkamp, 2021). A change from a sole focus on accountability to an emphasis on continuous improvement occurred with data use moving towards a more

sociocultural paradigm that is focused on continuously adapting learning environments to facilitate and optimise learning processes, considering learners' needs and individual needs. The findings emerging in relation to the use of progress monitoring data are significant. In effect, this study demonstrates that progress monitoring data is used by school leaders for strategic, pedagogical and operational decision-making. In addition, inspection evidence from three of the seven WSE-MLL reports highlight the importance of systematic analysis of student achievement as a core component of effective data use. This documentary evidence echoes the findings of the present study, where baseline and attainment data are used dynamically to monitor progression over time and inform responsive decision-making.

The evidence from RS3 demonstrates how data-informed decision-making can become institutionally embedded when supported by a coherent internal policy framework, distributed leadership structures and clearly defined roles across year heads, form tutors and AEN teams. The findings lend support to the argument that data has become an integral aspect to guide school improvement and evaluate students and teachers (Shi, 2025). While the findings from the research sites indicate practical successes and frustrations in the Irish context, the broader literature provides a theoretical framework that largely supports these practices while warning of systemic dangers. Importantly, the systematic use of data in this way reflects a broader shift in which monitoring practices move beyond administrative functions into the pedagogical core of schooling. These systems do not merely record information; they implicitly share what constitutes good teaching, how learning needs are identified and how communities are nurtured (Shi, 2025). In this way, administrative functions become inseparable from pedagogical ones (Perrotta *et al.*, 2021). Across practices such as behaviour tracking, attainment monitoring, and parental communication, data is positioned as the primary means through which educational processes are rendered visible, interpretable, and governable. What becomes less visible within this framing are the relational, affective, and inherently ambiguous dimensions of educational

experience. The issue, therefore, is not simply the adoption of digital tools, but a broader epistemological shift in which education is increasingly understood through a datafied logic that privileges visibility, standardisation, and calculability over professional dialogue and lived experience (Shi, 2025). The answer may lie somewhere between these two positions.

The findings indicate that data is also actively used to inform structural decision-making at school level. For example, RS1 introduced the Leaving Certificate Applied (LCA) programme in response to longitudinal data illustrating sustained underachievement among a cohort within traditional programmes, while RS5 implemented mixed-ability English classes following a data-driven review of higher-level uptake in the subject. Strategic accountability is also evidenced with principals in several research sites conducting annual one-to-one meetings with teachers to review result trends and set future targets. These findings demonstrate the extent to which policymakers have emphasised the significance of data use to make education an evidence-based discipline (Mandinach and Schildkamp, 2021). Strategic use of data involves long-term planning, curriculum changes and meeting external accountability requirements. Learning analytic tools are also used to identify students at risk of not graduating or dropping out of school (Sousa *et al.*, 2021). By analysing attendance, disciplinary records, and grade changes, schools can allocate limited resources more efficiently and target intervention programmes to those in most need (Sousa *et al.*, 2021).

From the literature, it is clear that the availability of large amounts of student data, including attainment data, expands the possibilities of academic success (Sousa *et al.*, 2021). The main objective of applying learning analytics in high schools was to predict student dropout or to protect and enhance students' learning outcomes (Sousa *et al.*, 2021). There was also an attempt to predict students' grades in order to provide support and personalisation (Blasi, 2017). Similarly, all eight research sites use monitoring for the early identification of underachievement. By comparing current results against baseline potential, initially derived

from CAT4 assessments along with information contained in the Educational Passport from primary school, schools can initiate academic support and mentoring programmes. This practice extends to High Academic Potential (HAP) students, and those in the middle range who may be gradually declining, ensuring that all students are appropriately challenged and supported rather than overlooked (RS5, P, RS8, AP1). As teaching is a relational endeavour, so too is the way that teachers make use of data (Selwyn, Pangrazio and Cumbo, 2022). Consistent with existing literature, this study has also emphasised how teachers often make practical use of data in a relational manner, both in collaboration with colleagues and as a way of stimulating dialogue with students to know them better, rather than a source of precise calculation (Selwyn, Pangrazio and Cumbo, 2022).

At a macro level, school-wide learning analytics enables a better understanding of learner cohorts to optimise processes and allow for the allocation of critical resources to improve retention rates (Ifenthaler, 2021). The cross-site analysis indicates that progress monitoring data was used in operational decision-making to support the day-to-day allocation of resources and initiate student interventions. At RS8, for example, data is reported to dictate the direction of teaching hours allocated for special educational needs and to determine where team teaching is required most (RS8, DP). Seven of the eight research sites operate a visual 'traffic light system' using Athena Tracker or Microsoft Excel. The principle behind this system is that when a student is flagged as 'red', it triggers an immediate intervention or meeting with senior management or a designated teacher mentor (RS4, AP1, RS8, AP1). These practices are further substantiated through assessment policy evidence which highlights the structured and cyclical nature of intervention processes across the schools.

Beyond results, learning analytics helps teachers to understand how students learn. The findings suggest that progress monitoring data is utilised to varying degrees across all research sites for pedagogical decision-making including differentiation, pacing and student feedback.

The wider literature describes the formative assessment approach where evidence is used to adapt the learning environment based on student needs (Gebhardt *et al.*, 2023). Across the research sites there was evidence of teachers utilising progress monitoring data to pitch their lessons. For example, in RS2, a teacher adjusted the pace of Higher-Level Maths for a class where the data showed most students at a H5 target compared to a previous cohort who were targeted at a higher level. In RS7, the Science department used attainment data illustrating that students struggled with specific topics to change the order of teaching units. Visual data from Athena Tracker is also used pedagogically to stimulate student motivation where the principal in RS4 described turning the screen to show a student a graph of their potential removing teacher subjectivity from what could sometimes be viewed as difficult conversations (RS4, P).

Taken together, the cross-site analysis of the assessment policies from seven of the research sites suggests that progress monitoring in Irish post-primary schools can be conceptualised as a multi-layered system comprising three interconnected dimensions. First, a technical layer involving digital platforms, standardised assessments and tracking systems enables the systematic collection and organisation of data. Second, an intervention layer ensures that these data are actively used to identify underachievement and inform targeted supports. Third, an emerging participatory layer incorporates student self-monitoring and reflective practices, signalling a shift toward greater student ownership of learning. While these layers are not evenly developed across all contexts, this framework highlights the evolution of monitoring from a predominantly administrative function to a dynamic and increasingly collaborative process.

While there are many examples of good practice and useful employment of monitoring data, only one of the eight schools had a coherent written vision and policy regarding the raising of academic achievement. It is noteworthy that this is the fee-paying school; a school that possesses dynamic leadership, employs highly skilled teachers and demands high expectations

from all stakeholders including highly motivated parents. There is a sense that the other seven schools are at an earlier stage in the process of integrating data derived from monitoring student progress and development into a coherent vision to improve student outcomes that is embedded school wide.

6.4. Positioning holistic monitoring as a foundation for meaningful progress

A significant finding across all research sites is the shared understanding among school leaders and teachers interviewed that holistic development, such as social, moral, and personal development, remains the foundation of academic success (Moore, 2019). Participants across the eight sites consistently identified wellbeing as a prerequisite for learning, emphasising that a student's sense of belonging directly influences attendance, engagement, and, ultimately, attainment. This perspective aligns closely with the *Wellbeing Policy Statement and Framework for Practice* (Department of Education and Skills, 2019), which positions wellbeing as integral to learning and development rather than a supplementary element of academic provision. This is supported by findings that teachers' academic monitoring creates a 'sense of care', which directly increases students' academic resilience (Peker and Cengiz, 2023). The act of monitoring academic activities, such as homework, study habits, and exam performance, can develop this sense of care, which in turn enhances a student's self-confidence and levels of optimism (Peker and Cengiz, 2023).

While the wider literature suggests that a pressure to produce data for meeting the expectations of testing and benchmarking systems can shift focus away from child-centred approaches, this did not emerge strongly in the present study (Shi, 2025). However, this may serve as a cautionary signal to policy makers and school leaders in post-primary schools in the Irish context. Under pressure to log data, the wider literature cautioned of the danger that teachers could be influenced to prioritise assessing and measuring students over making meaningful social and emotional connections with students (Shi, 2025). However, the findings across the

eight research sites further integrate this sense of care into a broader thematic framework focused on holistic student development. RS3 provides a particularly developed example of holistic monitoring, where pastoral care structures, attitudinal surveys (such as PASS), and academic tracking systems are deliberately integrated. Importantly, this approach is not informal or incidental but formally embedded within policy and validated through inspection processes, indicating that holistic monitoring can be systematically embedded rather than remaining an aspirational ideal.

There is evidence in the literature that illustrates that teacher support and monitoring are primary drivers of school satisfaction among students (Lei, Cui and Chiu, 2018; Gao *et al.*, 2023; Peker and Cengiz, 2023). Consistent with the policy direction evidenced in *Looking at Our School* (Department of Education, 2022a) school leaders across all sites emphasised that effective monitoring must extend beyond attainment to include pastoral care, relational support, and the cultivation of positive learning environments that promote student wellbeing and holistic development. While academic outcomes are monitored through formal systems, the findings suggest that the monitoring of personal and social development is predominantly informal and pastoral. This relies on the soft skills of teachers, class tutors, Special Needs Assistants and year heads who pick up on '*nuggets of information*' through daily interactions (RS7, P). This holistic orientation is further evidenced in school-level assessment policies, where monitoring frameworks extend beyond academic attainment to include structured tracking of student participation, wellbeing and personal development.

A striking insight from the findings that is absent from the literature review is the specific role of Special Needs Assistants in the data cycle. One principal noted that SNAs often possess a deeper understanding of AEN/SEN conditions than general subject teachers because of their specialised training (RS5, P). The findings illustrate that while SNAs use student data

effectively to support the correct challenge in the classroom related to the student(s) they are supporting, they remain a largely underutilised resource in formal school planning (RS5, P).

The findings relating to holistic monitoring and stakeholder engagement are reinforced through policy alignment. The SET Policy in RS1 formalises the role of SNAs in contributing to student support through weekly meetings and classroom observations, while the Assessment Policy in RS1 emphasises student wellbeing as a central objective. At the same time, tensions identified in the findings, particularly the shift from dialogic target-setting to more digital processes, are echoed in the SSE's prioritisation of student voice and reflection for 2024-2026 in RS1, suggesting an institutional recognition of the need to rebalance efficiency with meaningful engagement.

6.5. Structural, cultural and epistemic barriers to data use

A central finding of this study is that, despite increased engagement with progress monitoring, several barriers continue to limit the effective use of data across all research sites. These constraints operate at both individual and organisational levels and shape how data is interpreted, valued and applied in practice. While Goffin, Janssen and Vanhoof (2022) suggest that achievement data, including examination results and standardised assessments, have the potential to support school improvement, the findings indicate that their impact is contingent on users' capacity to interpret and apply them meaningfully. This finding echoes previous research which emphasises that data is not always straightforward and requires specific skills interpretation and application (Goffin, Janssen and Vanhoof, 2022). It also supports existing literature which highlights that data can only become worthwhile if those using it have the capacity and data literacy needed to make sense of it and apply it in a meaningful manner (Fjørtoft and Lai, 2021; Lai, Fjørtoft and Li, 2025). However, this study extends the literature by demonstrating how these challenges manifest in the Irish post-primary context, particularly in relation to fragmented systems and uneven staff capacity. Importantly, even in highly

developed contexts such as RS3, barriers persist, including workload pressures and varying levels of digital confidence.

6.5.1. Data literacy as an epistemic and practical constraint

A key finding is that limited data literacy among teachers significantly constrains the effective use of progress monitoring data. Participants across multiple research sites described difficulty interpreting data, particularly in relation to core metrics such as percentiles and standardised test scores (RS 3, AP1, RS7, P). This indicates that the primary challenge lies not in access to data, but the ability to translate data into actionable knowledge. This finding supports existing research which identifies that teachers often struggle with data use, frequently described as 'drowning in data', (Mandinach and Schildkamp, 2021, p. 6). However, it also extends the literature by demonstrating that these challenges are not solely technical but are compounded by uneven levels of data literacy across staff, resulting in inconsistent engagement with data practices across subject departments.

However, it also extends the literature by demonstrating the depth of the challenge, with some participants describing an '*absolute fear of numbers*' where being presented with a data spreadsheet can feel to some staff members like being '*electrocuted*' (RS3, ARR), indicating an emotional as well as technical barrier to data use. Teachers also reported limited formal professional development, with many describing themselves as self-taught or acquiring skills intuitively (RS1, T1, RS8, AP1). This suggests that the reliance on intuition identified in previous research (Goffin, Janssen and Vanhoof, 2022) may not reflect preference, but rather a lack of structured training and support. Recent research on learning analytics and professional development suggests that such support should help teachers to ask meaningful questions, interpret data in context, combine analytics with professional judgement, discuss evidence collaboratively and translate insights into school improvement actions (QUALAS, 2026).

6.5.2. School culture as an enabling or constraining condition for data use

The findings of this research study illustrate how contextual factors frame the way in which data use practice takes place in schools with curriculum and policy contexts providing both the rationale and the expectation that teachers use data for instruction (Lai, Fjørtoft and Li, 2025). A critical development in post-primary schools in Ireland in the last ten years is the explicit opportunity and tendency for teachers to analyse data collaboratively (Young *et al.*, 2018). This development has been influenced by the central place that evidence-informed decisions now have in policy and practice in post-primary schools in Ireland (Department of Education, 2022a). The formal achievement data provided by external assessments and feedback systems are generally regarded as an important source of school improvement. Studies illustrate that school leaders facilitate discussions on assessment data in a variety of venues including individual meetings, grade-level, or department-level meetings, thus fostering a schoolwide collaborative culture of data use (Lee, Camburn and Sebastian, 2025).

A finding that is common practice across sites is when teachers engage in the annual analysis of state assessment results within their subject departments, identifying connections between curriculum or pedagogical gaps and the necessary actions to address them. The convergence between the literature and the findings of this study illustrate that this is also a common practice in post-primary schools in Ireland. Yet one principal describes the analysis of state examination results as a critically important but difficult space to occupy due to the emotional response it triggers in teaching staff. To manage the fact that teachers hate being compared to national averages, the principal is meticulously careful with language. This is a finding echoed across all cases where subject departments are presented with the data and asked if they notice any trends or surprises, rather than necessarily being asked to justify or explain their results. The literature supports the view that principals' use of careful, intentional language, particularly as part of broader communication and trust-building practices, is central to effective data-

informed practice (Schildkamp and Datnow, 2022). In the Irish primary school context, although standardised testing is common, its impact depends largely on teacher attitudes; positive beliefs about data increase its use in instruction (Pitsia, Karakolidis and Lehane, 2021). This underscores that data use is shaped as much by perception and trust as by technical processes (Hawlitschek *et al.*, 2024).

Accountability demands have featured significantly in data use in many countries including Australia, Belgium, the Netherlands, the United Kingdom, and the United States (Datnow and Park, 2018). What is evident in the research is the delineation between high-stakes, accountability-driven data use, which stresses compliance with external pressure and bureaucratic demands, and data use for continuous school improvement and organisational learning (Datnow and Park, 2018). Across the globe, school leaders and teachers often have to balance these two competing agendas simultaneously (Datnow and Park, 2018). Viewed through Biesta's (2009) understanding of performative accountability, the Irish post-primary education system presents a nuanced case with the Leaving Certificate state examination functioning as a high-stakes qualification mechanism, but with the broader accountability of teachers and school leaders remaining comparatively low stakes at institutional level. Yet the experience of RS3 illustrates that accountability cultures are not neutral. While formal policy frames departmental data analysis as professional reflection, in practice this can produce competitive dynamics between departments. This suggests that data systems may simultaneously promote improvement and reshape school culture in ways that are not fully acknowledged in formal policy discourse.

Equally a pattern emerges in the present data to illustrate that there is a cultural resistance to data effectiveness evident in the findings that is often tied to the logistical constraints of the Irish teaching contract. Teachers and school leaders in all eight research sites explicitly identified time as a significant barrier to effective data use. The process of rich data analysis is

frequently pushed into an already crowded agenda during Croke Park hours, which are often resented by staff who perceive them as bureaucratic and added work rather than pedagogical support. Edtech companies often promise to free teachers from the burden of unnecessary administrative work. Yet empirical research has demonstrated datafying technologies often do the opposite, creating more administrative work for teachers, as the focus is increasingly on teacher performativity and accountability (Pangrazio, Duffy and Zomer, 2025). The findings of the study show that some school leaders can find it difficult to secure buy-in for monitoring tools. One principal noted that you can provide all the digital documentation in the world, but if teachers find it boring or cumbersome, they will simply ignore it during meetings to focus on their primary classroom duties (RS6, P). Teachers often discuss data in groups, yet few studies focus on how such collaboration can support teachers' data use (Lai, Fjørtoft and Li, 2025). Two strategies to improve the effectiveness of data collaborative practices includes developing protocols to support teachers' discussion and apprenticing new teachers into the group processes to develop situational awareness and acquire shared cultural norms (Lai, Fjørtoft and Li, 2025). The assumption is that teachers, school leaders and supporting staff will use data as a mirror in order to inform subsequent policy and instructional decisions (Goffin, Janssen and Vanhoof, 2022). Yet this finding warrants careful consideration, as it challenges assumptions about the affordances of data that are intrinsically connected with matters of accountability and the role of teachers' professionalism in education (Fjørtoft and Lai, 2021). The literature has often criticised the use of performance indicators in education, claiming that the overreliance on metrics may position teachers between a vision of education as school with a moral purpose on the one hand and a market-driven competitive logic on instruction and achievement on the other (Fjørtoft and Lai, 2021). There is a concern that the overreliance on data can lead to a redefinition and devaluation of teachers' work, which decreases teachers' agency in the classroom setting and can eventually lead to the 'disappearance' of the teachers

once the purpose and meaning in teaching is hollowed out with datafication processes (Daliri-Ngametua, Hardy and Creagh, 2022).

6.6. Leadership as mediation: Shaping conditions for effective and ethical data use

A key finding of this study is that school leadership acts as a central mediating force in shaping how data from digital progress monitoring systems is interpreted and enacted within schools. School leaders do not simply respond to data; rather, they actively frame its meaning, influence its use, and embed it within broader organisational processes. Valadas *et al.,* (2022, p. 61) argue that the use of digital platforms and technologies 'demands a paradigm shift in the conception of leadership, by integrating a digital component in school management and by assuming a pro-technology stance'. Certainly, school leaders 'face new challenges, such as updating their digital skills and mobilizing the educational community to recognize digital technologies to improve educational processes' (Valadas *et al.*, 2022, p. 61). WSE-MLL inspection evidence from seven of the eight research sites further illustrates this central role of school leadership in mobilising the school community and shaping how data is used in practice. School leaders are shown to promote evaluative collaboration using school-based review documents, strategic planning structures and ongoing reflection on student outcomes. This finding extends existing literature by demonstrating that leadership is not only a structural or managerial function, but an interpretive and cultural one, shaping how data is understood, valued and mobilised in practice.

All the school leaders in this research demonstrate a clear recognition of the importance of data derived from monitoring student progress and development as a lever in creating equitable outcomes for all students. A growing body of research suggests that school leaders are crucial actors in facilitating and sustaining teachers' use of data for instructional improvement (van den Boom-Muilenburg *et al.*, 2023; Lee, Camburn and Sebastian, 2025). The findings of this study strongly support this position, illustrating how leadership practices directly shape the

extent and quality of data use within schools. In general agreement with previous research findings in Ireland, this research demonstrates that school leaders are an important determinant in the utilisation of school data (Young *et al.*, 2018). More specifically, the findings indicate that leadership operates within a complex interplay of school context, staff capacity and organisational culture, shaping how data is translated into action. This echoes international research which identifies leadership as a crucial driver of data-informed decision-making (Schildkamp *et al.*, 2019; Lee, Camburn and Sebastian, 2025), while also extending this work by illustrating how these dynamics unfold in the Irish post-primary context.

The use of the distributed leadership model evident in the research findings of this study reflects a global policy reform regarding the conceptualisation of leadership in education (O'Rourke and O'Brien, 2026). Another key finding is that data use is predominantly enacted through distributed leadership structures, rather than being centralised at senior management level. Schildkamp *et al*., (2019) identify five key building blocks for school leaders aiming to build effective data teams in their school: (1) establishing a vision, norms and goals; (2) providing individualised support; (3) intellectual stimulation (4) creating a climate for data use; and (5) networking to connect different parts of the school organisation. Each of the eight schools demonstrated elements of these building blocks in relation to progress monitoring data.

While school leaders can serve as local experts by modelling data analysis techniques, scaffolding conversations about data to ensure accurate interpretation and connecting data insights to instructional strategies (Farrell and Marsh, 2016), the findings of this study extend this perspective by showing that leadership also involves creating the conditions under which such practices can be sustained. A distributed model of leadership in schools also assumes the empowerment of teachers (Barry *et al.*, 2022). This is reflected in the findings, where leadership practices were associated with teacher autonomy in using data to inform instruction and student support. Employing the model of distributed leadership, all principals identified an

assistant school leader with competencies related to technological and data literacy. Indeed, there was evidence in the focus group discussions of research site one, whose formal progress monitoring journey was initiated in 2013, that teachers were empowered to be leaders in relation to progress monitoring of their own students where ‘every teacher is a leader in the school’ (RS1, T1), particularly when they use data to pitch their own classroom lessons or mentor students.

Across the research findings, specific leadership functions are delegated to assistant principals who act as specialists or data champions. Two schools have established formal committees such as the academic council in RS1, which is chaired by an assistant principal 1 rather than the principal. Equally a recurring theme in the findings is the evolution of the year head role from a focus on discipline to one of academic leadership. For example, in RS3, the principal describes the year heads as ‘*mini team leaders*’ who co-ordinate a team of six form tutors focused on academic achievement and engagement rather than just behaviour management (RS3, P). This finding extends the existing literature by illustrating how middle leadership roles are increasingly central to the operationalisation of data-informed practices at student level. Five of the seven inspection reports indicate that collaborative organisational structures play a central role in the enactment of progress monitoring practices. Care teams, subject departments and year heads are routinely involved in reviewing data, identifying concerns and implementing interventions. This distributed approach to data use aligns strongly with the findings of this study, where responsibility for monitoring student progress is shared across multiple roles within the school, supporting more responsive and co-ordinated interventions.

Finally, the findings of this research study indicate that school leaders are using the data presented to them as just one aspect of an overall picture. This reflects a caution and balanced approach to data use, where quantitative indicators are supplemented by professional judgement and contextual knowledge. This finding aligns with existing literature, which

cautions that an overreliance on fragmented data points may obscure the broader educational context (Goffin, Janssen and Vanhoof, 2022). However, the findings in this study add nuance to this narrative by suggesting that school leaders actively mitigate this risk through holistic and relational approaches to data interpretation.

6.7. Student agency and data: Self-reflection as a mechanism for engagement and ownership

A key finding of this study is that student engagement in progress monitoring is increasingly positioned as a collaborative and reflective process, rather than a passive or compliance-driven activity. This suggests a shift in the function of monitoring from something that is often 'done to students' towards a more collaborative process 'completed with students' (Furey and Loftus-Rattan, 2022, p. 329). The findings indicate that the research sites demonstrated varying degrees of engagement with this process. Across sites, participants described practices whereby students were supported to engage with progress monitoring data, set targets, and reflect on their development over time. This aligns with Schildkamp *et al.*'s (2017) conceptualisation of data use as a cyclical and social process, in which data must be interpreted, discussed, and acted upon to influence learning and improvement. However, this study extends this framework by demonstrating how such practices are operationalised in post-primary school contexts, albeit unevenly across sites. Such practices reflect the use of data not merely for accountability purposes, but to support student agency, self-regulation, and ownership of learning. While implementation varied across contexts, the involvement of students in monitoring their own progress suggests an emerging shift towards more participatory forms of data use within schools.

A second key finding is that the implementation of student self-reflection remains uneven and highly dependent on school context and organisational culture. This indicates that while participatory data practices are emerging, they are not yet systematically embedded across all

settings. The involvement of students in monitoring their own progress is consistent with the Department of Education and Youth's student voice policy in Ireland, which positions learners as active partners in their educational experience rather than passive recipients of assessment outcomes (Department of Education, 2022a). *Looking at Our School* (2022) highlights the importance of enabling students to understand how they learn, reflect on their progress, and participate meaningfully in decisions that affect their learning. This finding therefore supports national policy direction while also revealing a gap between policy aspiration and school-level enactment. While the depth and consistency of implementation varied across contexts, the practices identified in this study suggest an emerging alignment between data-informed monitoring processes and national policy commitments to student voice, agency, and learner engagement. At RS3, student self-reflection is not an isolated classroom practice, but a structured, policy-aligned process embedded within school routines. This represents a more developed model of practice, where reflective engagement is institutionalised rather than dependent on individual teacher initiative.

A further finding is that student engagement in progress monitoring data practices remains underexplored within both research and practice, highlighting a significant gap in the literature (Paolucci *et al.*, 2024). This suggests that current understandings of learning analytics and data use may be incomplete, as they largely exclude the perspectives of those more directly affected (Francis *et al.*, 2020). This finding echoes existing critiques of the literature, which highlight the limited focus on student experience within research on datafication (Pangrazio, Selwyn and Cumbo, 2023b). It also supports and reinforces research indicating that learning analytics studies tend to prioritise teacher perspectives over those of students and parents (Martens, Wolf and Marez, 2024). However, this study extends this body of work by demonstrating how school leaders attempt to engage students with progress monitoring data, a practice that appears to be

influenced by the increasing priority given to student voice within SSE processes in Irish post-primary schools (Department of Education, 2022a).

6.8. Data, trust and care: Parental expectations and the politics of proactive communication

A key finding of this study is that parental expectations act as a significant and immediate driver of progress monitoring practices in Irish post-primary schools. This suggests that data use is not only shaped by policy, but also by the need for schools to demonstrate responsiveness, transparency and care to parents. The findings support and extend the assessment in the literature review of parents as key stakeholders who drive the demand for educational monitoring and accountability (Hartong and Manolev, 2023). The research findings validate this, with school leaders noting that parents expect the school to '*nurture the knowledge and talent*' of their children and provide evidence of progress (RS1, P). This is especially acute in the one fee-paying context in the research study where parents '*demand*' high standards of teaching and success (RS3, AP1). In this fee-paying context, formal reporting structures and detailed data analysis serve not only communicative functions but also operate as mechanisms of accountability. This finding supports and further develops the concept of the 'professionalization' of parenting (Hartong and Manolev, 2023, p.94), where parental engagement is increasingly mediated through access to performance and behaviour data. However, it also enriches this perspective by demonstrating that school leaders do not passively share data, but rather actively curate and use it strategically. While the literature often frames transparency as a goal of learning analytics, findings show that Irish school leaders often deliberately restrict parental access to raw data, such as CAT 4 scores or specific rankings, to prevent unnecessary student stress or unhealthy competition among students (RS2, T1, RS3, P, RS7, AP1).

The literature cautions however, that such a framing reduces parental involvement to a form of data management and surveillance, overlooking the complex social realities that shape parent-school relations (Shi, 2025). In contrast, the findings from this study suggest a more relational interpretation, where data is deployed to support dialogue rather than surveillance, particularly in face-to-face interactions. While previous research highlights the increased usage of digital technologies at school has changed the role of parents, this was not a prominent theme across the research sites, perhaps because of the early stage that post-primary schools in Ireland are at in relation to the datafication of education compared to other jurisdictions. In saying that, similar to parents in other jurisdictions, parents in Ireland are often direct users of classroom tools, in terms of communicating with the school, or helping their children to manage the technologies involved in school (Shi, 2025).

A further key finding is that visual data representations are used pedagogically during interactions with parents to support understanding and reduce perceived subjectivity. This highlights the role of data as a mediating tool in potentially sensitive discussions about attainment and expectations. This finding echoes existing literature on digital monitoring tools, which emphasises the role of visualisation in communicating student progress (Faber, Feskens and Visscher, 2023), but extends this work by illustrating how these tools are used in real-time interactions as part of a communication and relational strategy. All seven inspection reports describe and comment on the methods that the research sites use to communicate student progress to parents. Correspondingly, the findings show that all eight sites engage in proactive communication, with some utilising Athena Tracker data as a visual stimulus during parent-teacher meetings to provide an immediate snapshot of a student's trajectory. The findings reveal a specific pedagogical practice: physically turning the laptop screen during a meeting to show the parent and student their '*true potential*' line versus their attainment (RS4, P). This is used

specifically to remove teacher subjectivity and provide a non-judgement reality check to parents who have unrealistic expectations (RS7, T1).

The broader literature asserts that teacher academic monitoring creates a sense of care, which correlates with increased student satisfaction and hope (Bryce, Granger and Fraser, 2022). The findings strongly support this, reporting that parents are often '*delighted*' and '*impressed*' by the school's vigilance, viewing data-informed interventions not as surveillance, but as a sign that the school is 'minding' their child (RS1, AP1, RS2, DP, RS8, P). The literature focuses heavily on monitoring for students at risk of underachieving (Ifenthaler, 2021). Conversely, the findings highlight an important use of data for positive reinforcement, such as formal letters of commendations for students achieving over 90% (RS3) or being identified as High Academic Potential (RS5).

6.9. Conclusion

This research study makes an original empirical contribution by providing the first case study analysis of the systems and processes through which Irish post-primary school leaders monitor student progress and development at whole-school level. It advances the field conceptually by reframing progress monitoring from an administrative function to a strategic, leadership-mediated practice that is central to school improvement, equity and student support within a low-stakes accountability context. In doing so, it proposes a practice-informed model of how hybrid technological infrastructure, organisational routines and stakeholder engagement interact to enable data-informed decision-making in Irish post-primary schools.

This chapter has analysed the main insights from findings of the research considering the previous literature on the monitoring of student progress and development. To this end, the seven emergent themes are discussed in relation to the literature. The study critically examines the reliance of Irish post-primary schools on hybrid, customisable technological systems to monitor student progress and development, illuminating both the affordances of such systems

and the ongoing challenges of achieving data reliability and shared data literacy. The findings signal a significant development in the function of progress data from administrative record-keeping towards a strategic resource for school leader and teachers in enacting data-informed decision-making in Irish post-primary schools. At the same time, the analysis highlights the organisational and cultural barriers that shape data use in practice, while identifying collaborative processes that support the active involvement of teachers, students and parents in the interpretation and application of evidence for improvement.

Chapter seven concludes this research study with a succinct summary of the literature, methodological approach and key research findings. The research questions addressed in the study are revisited, and areas for further consideration are identified. The strengths and limitations of the study are also examined. Finally, recommendations for policy, professional practice and future research are proposed.

Chapter 7: Conclusion and recommendations

7.1. Introduction

This study addresses a gap in the literature by exploring the systems used by school leaders to monitor student progress and development in Irish post-primary schools. Within education systems research in the international context, significant attention has been directed towards the prediction and analysis of student performance, reflecting their relevance to both policy and practice (Khan *et al.*, 2019; Seckin Kapucu *et al.*, 2024). There is, however, a scarcity of literature related to this topic in the post-primary Irish context. The key research questions related to this study were:

1. What systems are in place for monitoring of students' progress and development in schools?
2. How are schools using the data collected?

7.2. Overview of the research study

This is the first study of its kind in the Irish context that examines how school leaders monitor student progress and development in post-primary schools and how they interpret and act upon the data generated. Chapter one establishes the rationale for this inquiry, highlighting the growing datafication of education, the increasing expectations placed on schools to use data for improvement, and the limited empirical understanding of how progress monitoring unfolds in Irish contexts. Chapter two situated the research in the Irish context. The critical analysis of the literature in Chapter three synthesises national and international research on data use and progress monitoring systems, while examining the cultural, organisational, and relational dynamics that shape data-informed practice in schools.

Chapter four details the research methodology and, drawing on relevant philosophical and methodological literature, outlines the specific research design employed. In line with the overarching pragmatic worldview, the research was driven by the questions asked. In response to those questions, the research employed a qualitative multi-site case study methodology. This

study included eight post-primary schools, encompassing DEIS and non-DEIS settings, a range of school sizes, and diverse contextual environments. This enabled the gathering of data from information-rich sources selected purposefully and with maximum variation. The rigour of the study was strengthened by the inclusion of multiple sources of data drawn from interviews, focus groups, and documents such as school policies and inspection reports. In addition, a variety of perspectives were incorporated into the research by including participants who held a variety of roles in the school sites.

The data was analysed and interpreted using a six-step approach to reflexive thematic analysis (Braun and Clarke, 2022). Chapter five presents the findings from the multi-site case study, including within-site findings and a cross-site analysis, which facilitated the identification of themes with broader applicability across the participating research sites. Chapter six then interprets these findings in relation to existing literature, demonstrating how digital tools and organisational cultures interact in shaping progress-monitoring practices. It argues that progress monitoring has shifted from a largely administrative task to a complex, relational, and leadership-mediated process that both supports and constrains data-informed improvement in Irish schools.

Chapter seven provides a summary of the findings and analysis of the study, before making recommendations for policy, practice, and further research. The strengths and limitations of the study are also acknowledged.

7.3. Overview of findings

Seven major themes were identified and are summarised below:

- Schools employ diverse digital systems and practices to monitor student progress, combining core systems with custom solutions.

- Data reliability remains a challenge, largely due to inconsistencies in data entry and the limited insight provided by standardised tests.
- Schools use data to inform decision-making, especially regarding the early identification of underachievement, targeted interventions, strategic planning and pedagogical practice.
- Schools place a strong emphasis on holistic monitoring where student wellbeing, personal and social development are considered alongside academic progress. School staff recognise the importance of student wellbeing and are actively monitoring student engagement, both formally and informally, depending on the school context.
- Structural, cultural and epidemic barriers to effective use of data exist including lack of resource capacity in schools, time constraints, lack of staff buy-in, and lack of professional learning in data literacy. Where resources are allocated, considerably improved systems are in place for monitoring and reporting on student progress.
- Schools encourage student engagement through self-reflection and target setting practices, although approaches vary and are not always consistently applied.
- Parental expectations shape accountability practices, with schools utilising proactive communication and data to support transparency and build trust.

A key theme in the analysis is the uneven development of digital monitoring systems. Schools operate within the absence of a coherent, integrated infrastructure, relying instead on fragmented, hybrid arrangements that combine management information systems, commercial tools and locally developed trackers. While these systems allow schools to construct functional monitoring processes, this patchwork infrastructure also results in inconsistencies and uneven capacity and sustainability across contexts.

Predictive data derived from standardised assessments, summative assessments and state examinations have become central to monitoring practices. The institutionalism of prediction

using learning analytics illustrates an ongoing tension between algorithmic forms of prediction, insufficient guidance from the Department of Education and Youth, and the exercise of professional judgement. The findings demonstrate that while predictive data plays an important role, in the absence of comprehensive guidance, it is consistently mediated by school leaders' and teachers' contextual knowledge, ensuring that data does not fully determine expectations or outcomes.

This research also recognises that progress monitoring data is now used across strategic, operational and pedagogical levels, informing school improvement planning, resource allocation, targeted intervention and classroom practices. This identifies a significant shift from data as record-keeping to the institutionalisation of data-informed decision-making as a meaningful tool in shaping educational processes. While national policy expects schools to adopt reflective, data-informed approaches, it provides limited guidance on how progress monitoring should be operationalised at leadership, classroom, or whole-school levels. This creates variability in practice and reinforces the central mediating role of school leadership, linking policy, data systems and classroom practice.

Importantly, the analysis demonstrates that progress monitoring data is utilised in a holistic manner, particularly in supporting students with special educational needs, where multiple sources of evidence are combined to inform context-sensitive decisions. At the same time, progress monitoring practices are shaped by a range of influences including educational policy frameworks, external inspection reports, parental expectations and school ethos. This positions data use as both an accountability mechanism and a form of care, where valuing the learner requires a comprehensive understanding of their progress and development.

Another important theme in this research is the centrality of holistic monitoring. Holistic monitoring is positioned as foundational for meaningful progress with student wellbeing,

relationships and personal development understood as fundamental to academic success across all research sites. While academic data is formalised through digital systems, the monitoring of personal and social development remains largely relational and informal. The indicates that effective progress monitoring depends on both measurable data and professional insight, emphasising the value of understanding students as individuals rather than solely as data points.

The analysis suggests that, despite these developments, significant structural, cultural and epistemic barriers to effective data use exist. Workload, time pressure, along with limited data literacy and confidence among staff, constrain the collaborative interpretation and meaningful application of data. Consequently, data cannot be understood as an objective basis for decision-making; rather, it is interpreted and negotiated by teachers and school leaders within specific organisational contexts. Importantly, the analysis also positions school culture as both an enabling and constraining condition for data use, with teacher attitudes, trust and perceptions of data shaping the extent to which monitoring practices are embedded. The analysis also reveals that where schools allocate sufficient resources, whether in terms of financial investment, expertise or time, significantly more coherent and effective systems for monitoring student progress are established.

School leadership acts as a central mediated influence in shaping how data is interpreted, valued, and enacted by establishing vision, structures and sustainable conditions for its use. The analysis highlights the significance of distributed leadership, with responsibilities shared across formal middle leadership roles including assistant principals, year heads and collaborative teams. This also allows for more co-ordinated and responsive approaches to monitoring and enables data gathered to support teachers in developing as pedagogical leaders within their own classrooms.

Analysis of the findings indicate an emerging shift towards greater student agency in relation to monitoring processes. Practices that support self-reflection and target setting indicate a move towards more participatory approaches, supporting student ownership of their learning. However, this remains unevenly developed across school contexts. In addition, the findings suggest that processes intended to improve stakeholder engagement can produce mixed and sometimes unintended outcomes. While student involvement in monitoring has increased, the shift toward digital tools has, in some cases, reduced the depth of meaningful dialogue, leading to more procedural than reflective engagement.

In addition, parental expectations are revealed to be an important driver of monitoring practices. Schools use data strategically to communicate progress, demonstrate care and manage expectations, highlighting the relational dimension of data use.

7.4. Contribution to knowledge

This research makes an original empirical and conceptual contribution to the field of data-informed decision-making and progress monitoring in education, particularly within the under-researched Irish post-primary context. A key addition to knowledge is that the Irish education system has established an expectation for student monitoring, not through a coherent policy in this regard, but through a more circuitous route. The expectation for schools to have monitoring and reporting systems is stated in Department of Education and Youth inspection guidelines and positively acknowledged in inspection reports but there are no explicit policies or guidelines on progress monitoring or learning analytics. Furthermore, this research establishes that schools with additional resources allocated to this work (privately funded) have more advanced systems and structures in place for using progress monitoring data to improve outcomes for students.

The study extends international research on data-informed decision-making by demonstrating how global shifts towards outcomes-focused, evidence-informed practice (Hawlitschek *et al.*,

2024) are interpreted, adapted and unevenly enacted within a specific context, thereby offering a nuanced, practice-based understanding of data use in schools. While existing research indicates the growing influence of data in shaping educational actors' decisions and perspectives (Shi, 2025), this study extends that knowledge by demonstrating how data use is operationalised in practice across multiple school contexts. This study provides new insights into how progress monitoring is enacted as a contextually mediated and negotiated process, rather than a linear or purely technical endeavour. It builds on existing research by demonstrating that while education systems globally are investing significant capital in robust data systems to provide real-time performance information, the actual implementation within Irish post-primary schools is a multifaceted negotiation between standardised and non-standardised metrics, holistic professional judgement and hybrid technological systems (Drake, 2021).

Significantly, this study advances the literature by reframing monitoring as a strategic, leadership-mediated process that supports equity, accountability and school improvement, rather than a simple administrative task. It also contributes to knowledge by illustrating the significant role of leadership, organisational culture and data literacy in shaping the effectiveness of data use.

7.5. Recommendations of the study

The recommendations of this study are discussed here in relation to policy, practice and research.

7.5.1. Recommendations for policy

While international trends towards sophisticated data analytics are increasingly shaping school practice, policy must go beyond promoting data use to coherently supporting its meaningful and equitable enactment in practice. There is a policy-practice misalignment between the expectations on schools to utilise progress monitoring data and the lack of comprehensive

policy guidance in this area. Policy mechanisms such as SSE position data use as imperative to school improvement, yet the findings indicate that this guidance is not as clear or comprehensive when it comes to progress monitoring data. It is recommended that a national policy on progress monitoring be developed to support schools in this area.

Equally, Department of Education and Youth expectations are not consistently supported by adequate infrastructure or professional development. An important recommendation is the development of a centrally supported, integrated data system for Irish post-primary schools, to allow teachers and school leaders to contextualise student progress and development. The findings identified a strong reliance on fragmented and commercially driven platforms, particularly for predictive analysis, which creates inconsistencies in data quality and accessibility. National provision of interoperable systems would reduce reliance on local expertise and ensure greater equity across schools. Equally policymakers should ensure that schools are supported with time, funding for personnel, and collaborative structures to engage meaningfully with data, recognising that effective implementation requires more than policy direction alone.

There is also a need for greater system-level investment in sustained professional learning in data literacy. This professional learning process needs to support reflective practice, collaborative dialogue, and evidence-informed decision-making at classroom, departmental, and whole-school levels.

The increasing reliance on predictive analytics and commercial tools raises significant policy concerns in relation to data validity, algorithmic bias and transparency, particularly in high-stakes decision-making contexts (Baker and Hawn, 2022). Given the increasing reliance on commercial predictive tools, policymakers must provide clear regulatory and ethical guidance

on their use. Policy should emphasise that predictive data must be used cautiously, with safeguards to prevent deficit-based labelling or a narrow understanding of student potential.

7.5.2. Recommendations for professional practice

At a system level, this study demonstrates that Irish post-primary schools have significantly evolved in how they use student progress data, aligning with international trends towards data-informed practice. However, this development remains uneven and context dependent. It is recommended that a national progress monitoring platform be developed to allow equitable access to all schools to a comprehensive, fit-for-purpose, progress monitoring tool.

In the absence of such a system-wide platform, it is recommended that the Department of Education and Youth provide clear guidelines for private providers, ensuring comprehensive, multi-layered, monitoring of student progress and development, alongside funding to guarantee equitable access.

Given the centrality of progress monitoring in post-primary schools, this responsibility should be formally embedded within middle leadership roles, with additional allocated time and resources to support this function.

The findings also illustrate the need to balance data-driven accountability and holistic educational values. While data is increasingly central to monitoring progress, it is important that teachers are supported in understanding the need to maintain appropriate balance. In particular, the data should complement key priorities such as student wellbeing, relationships and care, which remain foundational to learning. It is recommended that clearer guidance be provided to support teachers in enacting this balanced approach.

School leaders play a critical role in mediating how data is interpreted and enacted, demonstrating the value in building organisational capacity rather than focusing solely on technical solutions. For teachers, this research highlights that data-informed decision-making

is a professional and interpretive practice, requiring the integration of quantitative data with relational and contextual knowledge of students.

To support this, structured opportunities for collaboration, reflection and professional learning are essential, particularly to address challenges in data literacy and confidence. Teachers must be equipped to interpret, prioritise and triangulate data to inform decision-making (Goffin, Janssen and Vanhoof, 2022).

Effective practice also requires structured collaboration, where teachers engage in professional dialogue to co-construct meaning from data, enhancing consistency and confidence. Data in education is a significant driver of school improvement especially when it is used to inform instructional decision-making, but teachers need professional learning and time to collaborate. Crucially, data should continue to be integrated with professional judgement and relational knowledge, recognising that holistic progress monitoring, encompassing wellbeing and student engagement, is central to student success (Reeves, Summers and Grove, 2016; Prior, Goldstein and Leckie, 2021).

Finally, school leaders and teachers must also adopt a critical stance towards digital and predictive tools, ensuring their use supports rather than constrains student potential. When embedded effectively, data-informed decision making can enhance instructional quality and student outcomes (Spiele *et al.*, 2025).

7.5.3. Recommendations for further research

This study illustrates several important areas where further research is necessary to deepen understanding of progress monitoring in education. Future research could expand the scope of this study to involve school leaders and teacher leaders from various countries to identify commonalities and differences in the employment of systems used to monitor student progress and development. This comparative approach would identify context-specific challenges and

potential best practices, informing discourse on global standards for integrating technology with educational leadership (Karimov *et al.*, 2024).

Secondly, there remains a significant gap in the literature regarding school leaders' use of data analytics, despite evidence that leadership is central to the effective utilisation of data analytics in their schools (Karimov *et al.*, 2024). Further research is needed to explore how leaders interpret, mediate and strategically utilise data, particularly in contexts characterised by fragmented systems and increasing reliance on commercial platforms.

Thirdly, the rapid expansion of learning analytics and educational data mining necessities more critical and longitudinal research. While these approaches offer the potential to predict student performance and support personalised learning (Ifenthaler, 2021; Sousa *et al.*, 2021), their use in secondary education remains small-scale and uneven compared to higher education (Sousa *et al.*, 2021). Future research could explore how these technologies are implemented and sustained, as well as their actual impact on learning, teaching and student outcomes.

Fourthly, this research identifies the need for further research on stakeholder engagement in data use, particularly the roles of parents and students. While existing research demonstrates the significance of collaboration and social processes in data use (Schildkamp *et al.*, 2017, 2019; Pangrazio, Selwyn and Cumbo, 2023b), there remains limited empirical insight into how schools can meaningfully engage stakeholders. In particular, the use of progress monitoring data to support parental engagement, especially in DEIS contexts, represents an important but underexamined area, given the well-established influence of parental involvement on student outcomes (Schmid and Garrels, 2021).

7.6. Strengths and limitations of the study

Both the strengths and the limitations of this study need to be acknowledged. A strength of this study lies in the fact that it explores a novel and under-researched area in Irish post-primary

education. As identified in the literature, there is a notable absence of empirical studies examining how schools in Ireland systematically monitor student progress and development and use this data to inform decision-making at the whole-school level. This study addresses the gap in the literature by exploring the systems used by school leaders to monitor student progress and development and how school leaders and teachers interpret and act on the data produced.

An additional strength is the study's multi-site case study design, which facilitates a deep and comparative understanding of data-use practices across diverse school settings. By examining eight schools, the research captures both common patterns and contextual variations, strengthening the credibility and transferability of findings. This design also supported the identification of cross-site themes, presenting a more comprehensive account of how progress monitoring is enacted in practice.

Significantly, this research articulates a practice-focused perspective on data-informed decision-making, exploring how school leaders and teachers interpret, negotiate and action data in real-world settings. In doing so, it responds directly to calls in the literature for research that better contextualises data use and captures the complexities of practice (Schildkamp, 2019; Abrams, Varier and Mehdi, 2021).

A further important strength centres on this study's use of multiple sources of data, including school leader interviews, teacher focus group interviews and documentary analysis. This facilitated a more robust interpretation of the findings than would have been possible with a single data source. This allowed for triangulation, where insights from leadership practices, teacher experiences and formal policy and documentation were cross-compared to identify convergences, inconsistencies and contextual nuances in data-use practices.

This study also has limitations. This research study is context-specific, focusing exclusively on Irish post-primary settings. While this facilitates rich insight, it limits generalisability of

findings to other contexts, particularly those with different policy environments or technological infrastructures. The qualitative nature of the data collected relied on participant responses which can be subject to participant bias. To address this limitation, a variety of evidence was gathered at each site and included a variety of perspectives to support the credibility and reliability of the findings.

The primary empirical focus of this research was on the perspectives of school leaders and teachers. Since the study explores how schools use progress monitoring data, the direct perspectives of students and parents would enhance the breadth of insight captured.

7.7. Conclusion

This chapter has demonstrated that the monitoring of student progress and development in Irish post-primary schools has evolved significantly, aligning with international shifts towards data-informed decision-making and digital progress monitoring. This chapter summarises the findings and analysis of the study and makes recommendations for policy, practice and future research. It also outlines the strengths and limitations of this research. As this study has shown progress monitoring is now firmly embedded within the landscape of Irish post-primary education and is likely to become increasingly significant as schools continue to engage with digital technologies, educational data mining and data-informed practices. In my view, however, the future success of progress monitoring will depend not only on the collection of data but also on how schools are supported to use it meaningfully and collaboratively. If policymakers expect schools to implement systematic approaches to monitoring student progress and development, there must be a national conversation about its purpose, accompanied by comprehensive guidance, appropriate processional learning and opportunities for schools to share effective practice. The value of progress monitoring data lies not in the data itself, but in how it is interpreted, contextualised and applied to support equitable and holistic educational outcomes. This research positions school leadership as central to shaping

effective data practice, while also emphasising the need for data literacy and critical engagement with emerging technologies to support holistic student progress, development and care.

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Appendix A: Letter to the director of the National Association of Principals and Deputy Principals seeking permission to advertise research

10/03/2025

Paul Crone,
Director,
NAPD,
11 Wentworth,
Eblana Villas,
Grand Canal Street Lower,
Dublin 2
D02 EF24

Dear Paul,

My name is Helen McTighe, and I am currently pursuing a Doctorate in Education (Ed.D.) at the Institute of Education, Dublin City University. I am conducting research on the systems used to monitor students' progress and development in Irish post-primary schools, with a focus on how school leaders and teachers utilise the data collected.

Purpose of the Research

The aim of my study is to explore and analyse the systems employed in monitoring student progress and development, and to understand how this data informs decision-making processes within schools. This research is supervised by Professor Gerry McNamara and Assistant Professor Shivaun O'Brien.

Request for Assistance

To facilitate this research, I am seeking to engage with post-primary schools willing to participate in the study. I kindly request permission to advertise my research through the National Association of Principals and Deputy Principals (NAPD) platform. By doing so, I hope to reach potential participant schools and provide them with information about the study, including the nature of their involvement and the voluntary nature of participation.

Proposed Advertisement Content

The advertisement would include:

- A brief overview of the research purpose and objectives.
- An invitation for schools to participate in the study.
- Contact information for interested schools to reach out for further details.

Confidentiality and Ethical Considerations

All data collected will be anonymized to protect the identities of participants and their respective schools. Participation is entirely voluntary, and schools can withdraw from the study at any stage without any repercussions. The research adheres to Dublin City University's ethical guidelines and data protection policies.

I have attached an informed consent form, a plain language statement and a proposed advertisement for your review. Should you require any additional information or have any questions, please do not hesitate to contact me. I am also available to discuss this request further at your convenience.

Thank you for considering my request. Your support would be invaluable in advancing this research, which aims to enhance educational practices in Irish post-primary schools.

Yours sincerely,

Helen McTighe
Ed.D. Candidate
Dublin City University

Appendix B: Advertisement in 'Your NAPD End of the Week Update - 21st March 2025'

Calling All Post-Primary Schools! Participate in Research on Student Progress Monitoring

Helen McTighe, an Ed.D. candidate at Dublin City University, is conducting a study on how Irish post-primary schools monitor student progress and development.

Your school's involvement would include:

- Document Sharing: Providing policies or reports related to student progress monitoring.
- Interviews: Engaging in discussions with school leaders or coordinators overseeing the monitoring of student progress and development (60 minutes)
- Focus Groups: Participating in group interviews with teaching staff (60 minutes)

Key Points:

- Anonymity: All data will be anonymized to protect your school's identity.
- Voluntary Participation: Schools can withdraw from the study at any time.
- Ethical Compliance: The research adheres to Dublin City University's ethical guidelines.

For more information about this study or to volunteer for this study, please contact:

Name: Helen McTighe

Email: **helen.mctighe2@mail.dcu.ie**

MORE INFORMATION

Appendix C: Letter to Principals of schools participating in the research

Dear principal,

My name is Helen McTighe, and I am currently pursuing a Doctorate in Education (Ed.D.) at the Institute of Education, Dublin City University. I am writing to seek your permission to carry out research in [School Name], focusing on systems used to monitor students' progress and development in Irish post-primary schools.

Purpose of the Research The purpose of this study is to explore how schools monitor student progress and development and to understand how the data gathered is utilised by school leaders and teachers. This research is being supervised by Professor Gerry McNamara and Assistant Professor Shivaun O'Brien and aims to contribute to improving practices in educational settings.

Proposed Activities in the School With your consent, I propose to:

1. Review school documents related to the monitoring of student progress and development, such as assessment policy, additional educational needs policy, school improvement plans, reports, and/or digital policy.
2. Conduct an interview with the school principal or the teacher responsible for coordinating the monitoring of student progress and development (60minutes).
3. Facilitate a focus group interview with willing members of the teaching staff (60 minutes).

Anonymity and Confidentiality

All data collected will be anonymized and securely stored to protect participants' identities. Identifiable information, including names and school identifiers, will be redacted. Data collected will be used solely for this research project, and findings may be published in academic journals or included in my Ed.D. thesis. All data will be securely destroyed five years after the conclusion of the research.

Voluntary Participation

Participation in this research is entirely voluntary. Participants may withdraw at any stage without penalty. Additionally, participants will have the option to keep their cameras off during any video-recorded interviews.

I have enclosed an informed consent form, which provides further details about the study. Please let me know if you have any questions or require additional information. I am happy to meet or discuss this further at your convenience.

Thank you for considering this request. I greatly value your support in helping advance this research, which aims to enhance the educational experiences of students in Irish post-primary schools.

Yours sincerely,

Helen McTighe
Ed.D. Candidate
Dublin City University

Appendix D: Interview schedule for use with post-primary school leaders

This is the interview schedule for use with principals or other school leaders responsible for the monitoring of student progress and development. The idea of a semi-structured interview is to give the participant space to tell their experience, prompted by some questions throughout. Questions will not necessarily be asked in the order that they are presented. It is envisaged that participants may steer the conversation at times and many of the proposed items on the schedule for discussion may be indirectly approached in this way.

Introduction of Researcher

My name is Helen McTighe. I want to learn more about the systems used to monitor student progress and development in post-primary schools in Ireland.

Background information

Tell me a little about yourself and your school.

Defining Monitoring Practices (General Context)

- What does the monitoring of student progress and development look like in your school?
- What are the primary goals of monitoring student progress in your school context?
- How does your school balance the focus on academic progress with holistic student development (social, moral, and personal growth)?

Role of Technology in Monitoring

- What technological tools or systems does your school use to monitor student progress and development?
- How effective are these tools in providing actionable insights for teachers and leaders?
- What challenges do you encounter in implementing and maintaining these digital systems?
- How do you ensure that data from technological systems is used effectively by teachers and staff?

Data-Informed Decision-Making

- How is student performance data used in your school to make instructional decisions?

- Can you provide an example of a significant decision made based on student data?
- What steps do you take to ensure data-informed decision-making improves student outcomes?

Teacher Engagement

- How do you support teachers in using monitoring systems effectively in their daily practices?
- What training or professional development opportunities are offered to staff to build their capacity in data interpretation and application?
- How do you foster a culture of collaboration among teachers when it comes to analysing and using data about student progress and development?

Benefits of Monitoring Systems

- How have monitoring systems impacted student outcomes in your school?
- In what ways have these systems improved teacher instructional strategies?
- How does the data gathered from monitoring systems benefit your school as a whole (e.g., planning, accountability)?

Ethical Considerations

- How does your school address concerns about privacy and the ethical use of student data?
- How do you communicate to stakeholders about the types of data being collected and its purpose?
- What steps are taken to ensure the ethical implementation of learning analytics or digital monitoring tools?

Stakeholder Engagement

- How do you engage with parents to share insights from monitoring systems?
- In what ways are students involved in understanding or contributing to their own progress monitoring?
- What feedback have you received from stakeholders (parents, teachers, students) about the effectiveness of monitoring practices?

Challenges in Monitoring

- What are the most significant barriers you face in implementing effective systems to monitoring student progress and development?
- How do you address resistance from staff or parents towards data-informed approaches regarding student monitoring data?
- In your experience, how do standardised tests align or conflict with the goals of monitoring progress?

Summary-

- Is there anything else you would like to share with me about your experiences/ how you feel about those experiences?
- What comments or questions do you have for me? Is there anything you would like me to explain? What would you like to tell me that you've thought about during this interview?

Appendix E: Focus group schedule for use with members of the teaching staff

This is the focus group schedule for use with members of the teaching staff. It is envisaged that participants may steer the conversation at times and many of the proposed items on the schedule for discussion may be indirectly approached in this way.

The researcher will begin by welcoming the participants and thanking them for their time.

- She will introduce herself and give an outline of the study and its goals.
- The conventions of the focus group participations will then be outlined:

a. Informed consent forms
b. Confidentiality and anonymity (outline that each participant has picked their own name to protect their identity;
c. Recording of the session with the participant's permission;
d. There are no right or wrong answers; everyone's experience is unique and different. The researcher is here to learn from the participants.

Warm- up exercise

- Participants will be encouraged to briefly introduce themselves.

Opening question

- What do you think of when you hear the words monitoring students' progress and development?

Prompts

- What does the monitoring of student progress and development look like in your school?
- What are the primary goals of monitoring student progress in your school context?
- How does your school balance the focus on academic progress with holistic student development (social, moral, and personal growth)?

Key questions

Role of Technology in Monitoring

Prompts

- What technological tools or systems does your school use to monitor student progress and development?
- How effective are these tools in providing actionable insights for teachers?

- What challenges do you encounter in implementing and maintaining these digital systems?

Data-Informed Decision-Making

Prompts

- How is student performance data used in your school to make instructional decisions?
- Can you provide an example of a significant decision that influenced your teaching that was made based on student data?
- What steps do you take to ensure data-informed decision-making improves student outcomes?

Teacher Engagement

Prompts

- How often do you monitor students' progress and development?
- Do you feel supported in using monitoring systems effectively in your practice?
- What training or professional development opportunities have been offered to build your capacity in data interpretation and application?
- Is there a culture of collaboration among teachers when it comes to analysing and using data about student progress and development? How has this been fostered?

Benefits of Monitoring Systems

- How have systems used to monitor student progress and development impacted student outcomes in your school?
- In what ways have these systems improved your teaching strategies?
- How does the data gathered from monitoring systems benefit your school as a whole (e.g., planning, accountability)?

Ethical Considerations

- How does your school address concerns about privacy and the ethical use of student data?
- How do you communicate to stakeholders about the types of data being collected and its purpose?
- What steps are taken to ensure the ethical implementation of learning analytics or digital monitoring tools?

Stakeholder Engagement

- How do you engage with parents to share insights from monitoring systems?
- In what ways are students involved in understanding or contributing to their own progress monitoring?

- What feedback have you received from stakeholders (parents and students) about the effectiveness of monitoring practices?

Challenges in Monitoring

- What are the most significant barriers you face in implementing effective systems to monitoring student progress and development?
- How do you address resistance from colleagues or parents towards data-informed approaches regarding student monitoring data?
- In your experience, how do standardized tests align or conflict with the goals of monitoring progress?

Summary-

- Is there anything else you would like to share with me about your experiences/ how you feel about those experiences?
- What comments or questions do you have for me? Is there anything you would like me to explain? What would you like to tell me that you've thought about during this interview?

To sum up:

- Thinking about our discussion here today, what was the most important topic we discussed?
- Researcher will give a brief summary of the discussion.
- Does that capture the key points we discussed here today?
- Have we missed anything?
- Is there something you think we should have spoken about but didn't.
- Sincere thanks for your participation. Any questions.

Appendix F: Introductory statement: plain language statement for research participants

Proposed Title of Research Study: A vision for monitoring of student progress and development in post-primary schools in Ireland: An exploration of systems used by school leaders to monitor student progress and development

Dear participant,

I, Helen McTighe, am engaging in Ed.D. research in Dublin City University Institute of Education. This research aims to explore some case study examples involving systems used by school leaders and teachers to monitor students' progress and development in Irish post-primary schools. My research supervisors are Professor Gerry McNamara and Assistant Professor Shivaun O' Brien.

I would like to invite you to participate in this study as your experience in post-primary education will prove very insightful.

What is involved for participants?

You will be asked to provide data for the research by taking part in the following:

- **Interview –** The school principal or teacher leader responsible for the co-ordination of systems used to monitor students' progress and development will be asked to take part in an interview. Here you will be asked questions and engage in dialogue concerning your experience and perspectives regarding systems used to monitor students' progress and development
- **Focus group/interview** – Willing participants among the teaching staff will be asked to take part in a focus group. Here you will be asked questions and engage in dialogue concerning your experience and perspectives regarding systems used to monitor student progress and development and the use of the data gathered from these systems.
- **School planning documentation** - You will be asked to provide any school documentation that refers to the monitoring of students' progress and development e.g. Assessment policy, additional educational needs policy, wellbeing policy, digital policy, school self-evaluation reports and/or improvement planning documents etc.

Why?

The purpose of the collection of this data is to inform the practice of school leaders regarding the considered use of data derived from academic monitoring. This data will be used in an Ed.D. thesis in a fully anonymised form.

How interview/focus group work?

I will request that interviews/focus groups be recorded in audio format to facilitate data gathering and data analysis.

How will the school documentation element work?

You will be asked to provide any school documentation that refers to the monitoring of students' progress and development. These will be analysed to address the research questions. Any identifying information from documents will be redacted.

How will taking part benefit you?

Participants may benefit by having their voice heard, by sharing their professional experiences, and by facilitating educational research.

Are their potential risks to me as a participant arising from my involvement in the research?

Due to the small number of participants in the study, anonymity cannot be guaranteed. However, all steps to ensure complete anonymity are taken. It is my priority that schools and participants are unidentifiable.

How is my confidentiality protected?

I will apply a pseudonym to any data stored or included in the research. All data will be anonymised. Participant and school names will be redacted and will not be used in the study. Confidentiality of information can only be protected within the limitations of the law - i.e., it is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions.

Your participation is entirely voluntary

You may withdraw your consent to take part at any point. Previously collected data will still be processed unless otherwise requested by you. If requested, your data will be deleted at any point.

Your personal data and GDPR compliance

- Dublin City University (DCU) is the data controller for this research.
- Files will be stored on Microsoft Word and will be accessed using a password protected computer. Any notes made by the researcher will be kept in a locked cabinet in the researcher's home and will not feature names of participants or schools/locations. Only the researcher will have access to this cabinet.

- Data will not be shared or transferred. The researcher, Helen McTighe, and the researcher's supervisors, Professor Gerry McNamara and Assistant Professor Shivaun O' Brien, will have access to the data.
- Data may be used to inform future research of a similar nature including future academic publications.
- Data will be retained for five years following the conclusion of the research and then destroyed by Helen McTighe. This will enable the analysis of the data, submission of the Ed.D. thesis, and publication of the findings in academic journal(s). Helen McTighe will delete all data.
- You have the right to lodge a complaint with the Irish Data Protection Commission at any point.
- You have the right to access your own personal data, and you can do this by contacting the DCU Data Protection Unit through the DCU Data Protection Officer –Mr. Martin Ward (data.protection@dcu.ie) Ph: 7005118 / 7008257).
- You can withdraw consent to take part or include your data at any point by contacting the researcher.

Contact information

If you have any questions about this project, please contact the researcher.

Name: Helen McTighe

Tel: 086-0509380

Email: helen.mctighe2@mail.dcu.ie

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9. Tel 01-7008000, e-mail rec@dcu.ie

Appendix G: Informed consent form: principal interview, focus group interview with teaching staff and school document analysis

What is the purpose of the research?

I, Helen McTighe, am seeking to complete Ed.D. research in Dublin City University, Institute of Education. I am exploring the systems used to monitoring students' progress and development in Irish post-primary schools. I am interested in how the data gathered is used by school leaders and teachers. My research supervisors are Professor Gerry McNamara and Assistant Professor Shivaun O' Brien.

I would like to invite you to participate in this study.

What you will be expected to do in the research study?

The school will be asked to provide any documents that refer to the monitoring of student progress and development (assessment policy, additional educational needs policy, wellbeing policy, digital policy and/or school improvement plans/ reports). The school principal or teacher responsible for the co-ordination of the monitoring of student progress and development will be asked to participate in an interview. Willing participants among the teaching staff will be asked to take part in a focus group interview.

How your data will be anonymised?

Your data will be anonymised and analysed for inclusion in an Ed.D. thesis. This anonymised data will be included in an Ed.D. thesis and may be published in academic journal articles.

Participant – please complete the following (Circle Yes or No for each question)

I have read the Plain Language Statement (or had it read to me)

Yes/No

I understand the information provided

Yes/No

I have had an opportunity to ask questions and discuss this study

Yes/No

I have received satisfactory answers to all my questions

Yes/No

I am aware that my interview will be video and audiotaped

Yes/No

I am aware that I can choose to keep my camera off

Yes/No

Your involvement in the research study is voluntary

I understand that I may withdraw from the research study at any point

Yes/No

Confidentiality of your data and legal limitations

To protect your identity, you will use a pseudonym interviews. Your data will be recorded using a unique identifier/pseudonym to preserve anonymity. The interview/focus group will be recorded in audio format. Any information that could identify you, including your name and school, will be redacted from the research. Data collected will not be used for any other purpose than that outlined above. Every available means of ensuring your anonymity is made in line with the legal limitations and DCU data protection guidelines. Due to the sample size, you are advised that certainty concerning anonymity cannot be guaranteed. All data generated in the research study will be held securely in a locked cabinet or with a password encrypted electronic device. Your data will be used in an Ed.D. thesis and may be published in academic journals. The data will be destroyed five years after the research project by Helen McTighe

Signature:

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project

Participants Signature: _____

Name in Block Capitals: _____

Witness: _____

Date: _____

Appendix H: Ethics approval

Institiúid Oideachais DCU
Campas Phádraig, DCU
Droim Conrach
Baile Átha Cliath 9
D09 YT18
Éire

DCU Institute of Education
DCU St. Patricks Campus
Drumcondra
Dublin 9
D09 YT18
Ireland

+353 1 700 9161
ioe@dcu.ie
dcu.ie/ioe

Helen McTighe
Ed.D. Candidate
School of Policy & Practice

IoE F-REC Reference: FREC2025/012

Proposal Title: A vision for monitoring of student progress and development in post-primary schools in Ireland: an exploration of systems used by school leaders to monitor student progress and development

Project Supervisor(s): Dr Shivaun O'Brien, Prof Gerry McNamara

26th February 2025

Dear Helen,

Thank you for your recent submission to the Faculty Research Ethics Committee (FREC). Further to its review by the committee and resting on the assumption of information accuracy and completeness, IoE F-REC is pleased to issue ethical approval for this research project. Please include reference to this approval in all materials used to recruit research participants.

Researchers are responsible for ensuring that the research project to which this ethical approval refers is carried out as specifically described in the application form. Should modifications to the research project be required at a later stage, researchers must submit a research amendment application form to F-REC for approval, prior to the implementation of modifications.

Please note that it is the responsibility of the PI to ensure that any other DCU compliance requirements relevant to the research project, such as those related to data protection, insurance, health and safety, or legal issues, are fully met in advance of initiating the project.

IoE F-REC wishes you every success in your research.

Yours sincerely,

Darina Scully

Dr. Darina Scully
Chair of Faculty Research Ethics Committee
DCU Institute of Education
DCU St Patrick's Campus,
Drumcondra,
Dublin 9, Ireland

Note: Please retain this approval letter for future publication purposes.
Research students should include this letter as a thesis appendix.