# School Improvement in a Regional, Rural and Remote Diocese: An Exploratory Case Study

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# School Improvement in a Regional, Rural and Remote Diocese: An Exploratory Case Study

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## Statement of Sources

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma. No parts of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution No other person's work has been used without due acknowledgement in the main text of the thesis. All research procedures reported in this thesis received the approval of the Australian Catholic University Human Research Ethics Committee.

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## Abstract

This research aims to understand the processes of school improvement in a regional, rural and remote Catholic Diocese in Australia. It draws on the role that educational system leaders and school leadership teams have adopted in enacting system-wide strategies aimed at achieving desired school improvement in remote schools. The approach of such system leaders has been to increasingly lead educational change by measuring success in terms of student learning achievement and welfare, improvement in standards of literacy and numeracy, and in the Australian context the paradigm of closing the gap between indigenous and non-indigenous students (Cranston, Kimber, Mulford, Reid, & Keating, 2010). Within this context, this research aims to explore how some teachers, school leaders and system leaders have endeavoured to implement school improvement processes within a regional, rural and remote Diocese that can enhance the learning culture and better cater for the learning needs of all students.

Thus, the research question guiding this study is: In what ways do teachers, school leaders, and system leaders determine and implement school improvement initiatives in regional, rural and remote Catholic schools? Hence, it is necessary to ascertain what school improvement strategies are being employed by the participating regional, rural and remote Catholic school teachers, school leaders and system leaders; the evidence that supported the selection and implementation of these strategies; and, finally, the data used to determine the effectiveness of the strategies.

Based on the epistemological position of constructivism, this research adopts the theoretical perspective of interpretivism and the approach of symbolic interactionism. In support of this theoretical perspective, an exploratory case study methodology is used to examine the school improvement journeys of 12 school and system leaders, with data collected through semi-structured interviews, document analysis and a reflective journal.

Accordingly, the research findings will explore the relationships that are conceptualised within school leadership teams and system leaders as they lead school improvement in the participating regional, rural and remote Catholic Diocese. Through this research, I highlight the context specific school improvement needs of regional, rural and remote Catholic primary schools, thereby enabling school system leaders, school leaders and teachers to implement more effective and successful strategies for such schools.

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With all my appreciation,

Justin Matthews

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# Chapter 1: Identification of the Research problem

## 1.1 Overview of the Chapter

The aim of this chapter is to provide a critical analysis and overview of school improvement within a regional, rural and remote Catholic Diocese. There will be a review of the theoretical constructs and issues, which assists to provide direction to the research questions. In addition, there will be a situational analysis, whereby regional, rural and remote education will be outlined to provide context for the school improvement projects in a particular regional, rural and remote Diocese. This is a means of highlighting the salient challenges of the project that are pertinent to counteracting disadvantages within the Diocese.

## 1.2 Preamble

Cassie works in a butcher's shop to provide a better life for her son, Henry. She helps her customers to eat healthier. Cassie knows everyone who comes into her shop; most of her customers are Aboriginal like herself, who have lived for generations in this remote area and who want a better life for their children. She helps at the local Rugby League club getting the younger generations to participate in sport and an active lifestyle.

Cassie was in jail when she was younger. She tells the story of being in jail with a bunch of young girls who were illiterate, into drugs and had experienced trauma. She went to jail because she clashed with authority in her youth. Many of the girls in jail were her relations and neighbours. For many years afterwards as she moved further away from her home, she paid the price for her resentment, and every time there was a reason to disturb the peace, Cassie was often in the centre of it.

When Henry was four, Cassie and he went to a party in Sydney. Cassie saw that a lot of her friends had died, and the young ones were looking sick. She talked and listened to the stories of trauma, and she realised that she could no longer go on living like this. Cassie picked Henry up and walked home with Henry asleep in her arms. In the breathless city, Cassie put her son to bed, crying tears over the sleeping Henry. Cassie went to rehab for three months to sort herself out. As she was being released, Cassie made a promise to her son Henry that she would try her best to live a good life. That night, her family fled home along roads under a blanket of Western stars.

Cassie was fortunate that she secured casual work at the local supermarket through a relative. After two years, a butcher who shared a love of the Parramatta Eels encouraged her

to take up a trade as a butcher. In the abattoirs, Cassie was at first shocked to see the treatment of animals. She was brought up to care for animals if they were hurt. As Cassie worked hard at her new trade, she found there was also great kindness in her workplace. Her neighbours who lived across the road helped her with childminding and assisting her with negotiating the relationships that existed in the remote town.

Cassie wanted to find the best school for her son, but she was limited for choice. She investigated her local schools; she found out information from her friends and relations. Cassie had questions: Was the school safe? What type of school would be needed to support Henry in his life? Were there good teachers? Were there other children who had experienced similar things to Henry? When Henry was four and seven months and, in her eyes, still very much a baby, Cassie enrolled him into a school. Although their family had no money, he attended a Catholic school where the principal waived their fees. This remote Catholic school had many parents from disadvantaged backgrounds characterised by poverty. However, the school had a strong educative leadership focus with supports for Indigenous students, such as learning the local language. The school had strong system leadership, with funds being allocated to assist the school to provide the best education possible. System coaches who were specialists in inclusive education, speech pathology and curriculum supported the teachers and students. The school had engaged in a process of significant educational change over many years and had developed school culture to the point where collaboration and professional dialogue were instrumental in driving pedagogical improvement. Cassie had found a school that was well-led and well-resourced, that could provide a quality education for Henry at a crucial time of his life.

In his new school, Henry had many teachers who helped him with his English and Mathematics, for which Henry showed an aptitude. At every step, there were teachers who were invested in his education. At home, Henry received from Cassie the loving and stable environment that makes for an idyllic childhood. Despite the cumulative barrier of disadvantage that is remoteness, Cassie hopes that Henry will emerge from school as a strong and caring young man.

### 1.3 Introduction

In regional, rural and remote schools in Australia, there are many such *Cassies* and *Henrys*. The current research project will highlight the historical and contextual factors of system leadership and the way that they enact school improvement in a regional, rural and remote Catholic Diocese. Reflecting on my time as a newly appointed school principal in a remote

school, I too frequently witnessed the hope that parents held for their children and the belief that these parents had in education creating a better life for them. Cassie and Henry are not unique within our education systems. Despite the structural inequalities of remoteness, these parents believed that if their children worked hard enough at school, developed a good work ethic and listened to their teachers, they would become doctors, nurses, farmers and teachers in the future. It is these families' hope, just like the story of Cassie and Henry, that I wish to sustain in researching the role of system leadership in tackling disadvantage.

This research has been kindled by my interest in working in schools characterised by remoteness and economic disadvantage. I have been a school principal and a system leader in regional, rural and remote Australia, and this has helped shape my worldview. During my Master of Educational Leadership from Australian Catholic University, my interest was piqued by reading, writing and thinking about education. In many ways, the question for me is, how do we create *just institutions*? When I read educators such as Plato, Rousseau, or Freire, contained within their ideas is the desire for just institutions and, through these, a more just society.

Thus, I can state that my passion is the creation of such institutions and exploring how educators can differently address the challenges facing regional, rural and remote Australia. I have been interested in the roles that school leaders (principals and leaders of pedagogy) and system leaders (school performance leaders and subject matter experts) play in guiding this system improvement. I feel that this work – implementing educational change that aims to reduce gaps by improving student achievement – is vital. Against the backdrop of government policy conformity and working in school and system leadership, I have heard many dedicated professionals call for justice in addressing regional, rural and remote education within these school communities. For me, this has been the stimulus for further research.

My experiences in the primary education system have led me to believe that the most effective school improvements occur when relationships are central to the implementation of change. Furthermore, system leadership is about identifying the challenge of how to develop a high-equity and high-quality education for the students who attend disadvantaged schools (Nielsen, 2013). I have worked with school and system leaders who are resolute and clear-sighted about school improvement. These system leaders have initiated school improvement projects that seek to advance student achievement in regional, rural and remote Catholic schools, by working closely with, and being embedded within, these schools.

My professional background has led me to hold shared beliefs and values with these school and system leaders about addressing disadvantages within schools. However, rather than unquestioningly follow policy, I feel it is necessary to critically appraise and challenge my own assumptions about school improvement. Indeed, in his seminal work *Pedagogy of the oppressed* (1970), Freire warns of the dangers of using the term *disadvantaged* when it is a "part of the dominant social construction of images that are treated as unproblematic" (p. 22). Similarly, this sharing of the problem-solving for rural, regional and remote communities is not without its cost to teachers, whose workload is already overburdened with change fatigue and the myriad challenges that one faces in complex classrooms. However, in working with system leaders, I felt that there was a discourse that emphasised a language of shared beliefs, values, accountability, trust, culture and hope. For these system leaders, their school improvement journey revolves around the small victories of implementing educational change, the powerful conversations around learning and teaching, and celebrating the successes of individual student achievement. In contrast, when these shared values and beliefs did not exist, leaders understandably encountered a lack of buy-in from staff or pockets of resistance. Working as a team undoubtedly helps in building the collective vision and capacity that is needed to be able to have a sustainable school improvement trajectory.

Why was I interested in using a school improvement perspective as a lens for research? It was the impact of being a school principal in a remote Catholic school and seeking as part of this leadership role to create just institutions. In the day-to-day joys and frustrations of teaching, it was the students at the school that shaped my views the most, through their circumstances and how they coped with living in a remote community. Learning how to provide solace, wisdom and inspiration for these students changed the way that I implemented school improvement efforts. From a theoretical perspective, I found that school improvement methodology, as well as the preferential option for the poor in Catholic social teaching, dealt cogently with the issues that my students faced each day. These ideas have been instilled into my worldview during the conduct of this research.

### 1.4 Research Problem

This research was set against the backdrop of balancing large-scale educational reforms with the contextual needs of regional, rural and remote schools in the recursive and sometimes serpentine debates about school improvement. It draws on the role that educational system leaders have adopted in enacting system-wide strategies to school improvement in rural, regional and remote schools. As such, this somewhat universal approach is lacking in

contextual specificity in terms of school leadership capacity, teacher capability, and student needs. This being so, the effectiveness of these well-intentioned school improvement strategies might well be compromised.

This research was based within a regional, rural and remote Catholic Diocese in Australia. One of the hallmarks of the schools in this Diocese is the diversity of students and the way in which each school:

> … takes into account each student's strengths, learning needs, their cultural and language background, disability, learning disabilities and difficulties, as well as individual student attitudes and abilities … [in order to] promote justice, particularly to those who are culturally, physically, intellectually, financially or spiritually disadvantaged. (Catholic Schools Office, 2015, p. 4)

As part of the Diocese's strategic plans, school improvement is explicitly identified as "the relentless pursuit of goals which contribute to improving student learning outcomes" (Catholic schools office: 2015, p. 2). The strategic plans of the CSO, which emphasise a "relentless pursuit of goals", resonate prominently when considering school leadership and reform agendas in regional, rural and remote contexts. This raises the question: do these plans adequately address the unique challenges posed by rurality and remoteness? Such alignment between strategic plans and the on-ground reality in these schools informed the choice of an exploratory case study methodology.

Utilising this methodology, the research aimed to investigate school and system leaders' perceptions about their school improvement journeys. Through semi-structured interviews, document analysis, and a reflective journal, their experiences and understandings were sought. Central to this research is the understanding of dynamics at various leadership levels. The study focuses on the roles played by school and system leaders such as school principals, leaders of pedagogy, school performance leaders and subject matter experts. Specifically, it examines how school and system leaders influence the planning, design, implementation and evaluation of school improvement. Moreover, the relationships among these stakeholders and how co-design contributes to the outcomes of these strategies is of interest.

At its core, the research seeks to better understand how rural, regional, rural and remote schools provide quality education for their students. By juxtaposing their intended outcomes with what they achieve in practice, the intricacies of the design and implementation

processes are unveiled. The guiding question, therefore, centres on the following: *in what ways do teachers, principals, and system leaders conceptualise and implement school improvement initiatives in regional, rural and remote Catholic schools?*

Arguably, there is a strong emphasis in school improvement within Western societies for system-led leadership to be the catalyst for sustained school improvement. The analysis of system leaders and policymakers who develop system-wide responses for school improvement has been critiqued in the literature (Ball, 2008; Collarbone, 2009; Fullan, 2016; Hargreaves & Fullan, 2012; Lewis, 2020; Lingard & Keddie, 2013; Sugrue, 2009). The themes from this literature suggest that while system leadership can bring coherence and direction, these system leaders may sometimes ignore the contextual needs of schools. Ball (2008), Lewis (2020) and Lingard & Keddie (2013) highlight the challenges of a one-size-fits-all approach to school improvement. Whereas Fullan (2016) emphasises the potential of system leaders having impact in their roles when accompanied by bottom-up feedback mechanisms. Collarbone (2009) and Sugrue (2009) emphasise the importance of contextual awareness in any system-wide improvement strategy. Meanwhile, Hargreaves & Fullan (2012) underline the delicate balance needed between the system leaders and localised autonomy for school leaders. Increasingly, there is considerable research on system leaders that addresses factors in school improvement, such as utilising data to lead learning (Farrell & Marsh, 2016), or the promotion of an instructional school culture based on change (Kraft et al., 2015). Whilst arguing that system leadership is effective in promoting school improvement journeys, such conceptualisations focus on whole system improvement at a macro-level and the broader beliefs, processes and values that lead to educational change. At the same time, literature addressing the gap between system leadership policy discourse and the reality of school improvement is limited.

This research advances the field of educational leadership and school improvement by providing an in-depth exploration of school and system leadership within the unique context of regional, rural, and remote schools. It challenges the prevailing one-size-fits-all approaches to school improvement by acknowledging and addressing the critical need for contextual specificity. By focusing on a Catholic Diocese in Australia, it also illuminates the diverse and complex challenges faced by Catholic schools in rural, regional and remote areas, a point made more significant by Catholic schools frequently serving less advantaged communities in Australia. As such, these insights will contribute vital and often overlooked perspectives in the research literature.

Through an exploratory case study methodology, this research uncovers the perceptions and experiences of school and system leaders as they navigate their school improvement journeys. It extends the current understanding by emphasising the importance of aligning strategic plans with the on-the-ground realities of context, including – amongst other factors – regionality, rurality and remoteness. The nuanced examination of how school and system leaders at various levels will help conceptualise improvement initiatives, thereby offering new insights into the dynamics of planning, design, implementation, and evaluation in these educational settings.

Moreover, by integrating the principles of Catholic social justice teaching, organisational ecology and implementation science, this study provides a novel framework for understanding and addressing the challenges inherent in all school improvement efforts. It moves the field forward by not only bridging the gap between policy discourse and practical enactment, but also by highlighting the collaborative processes that underpin effective change. This research, therefore, enriches the discourse on educational leadership and school improvement, advocating for a more inclusive and adaptive approach that is sensitive to the distinct needs of rural, regional, and remote communities.

Evaluations of school improvement often bring to the forefront areas of potential disagreement or tension. Such evaluations might highlight differing views on what constitutes successful change or uncover resistance to new initiatives. For example, Jabbar (2015b) charted the course of schools in New Orleans, Louisiana as the schools undertook system-led reform. Jabbar (2015b) argues the role of system leaders as dependent in part on their "perceptions of competition and their status in the market hierarchy. Some took steps towards school improvement by making academic and operational changes, others engaged in marketing or *'cream-skimming"*" (p. 638; emphasis added). What matters in school improvement is whether the gap between what is prescribed and what is enacted leads to school improvement. Therefore, what is missing from this research are the stories of system and school leaders and an exploration of how these groups work together to plan, design, implement and evaluate school improvement. This has Catholic social justice teaching considerations that I wish to explore in this thesis. Furthermore, the current research also draws on the literature of organisational ecology and implementation science as a way of conceptualising the problem. The research will also provide school and system leaders with school improvement strategies within a regional, rural and remote Diocese.

Embedded within the research problem of navigating large-scale educational reforms in regional, rural, and remote schools, my positionality as a School Performance Leader

within the [Catholic Schools Office Diocese] provides a unique insider perspective. This dual role of system leader and researcher offers the opportunity to intimately understand the complexities and challenges faced by schools within this Diocese, as well as firsthand experience in implementing and evaluating the school improvement strategies that are central to this research. Part of my contribution to this environment has been the establishment of a data ecosystem designed to support the strategic alignment and evaluation of school improvement initiatives. Recognising the potential influence of my insider role on the research, I employed a research assistant to collect the data, ensuring an additional layer of objectivity and mitigating any bias in data collection and analysis. This strategic decision allowed for a more impartial gathering of information, contributing to the study's rigor and credibility.

My work involves close collaboration with school principals, leadership teams, and the broader educational community to foster effective leadership and management of our Catholic Professional Learning Community, directly aligning with the core focus of my research. This insider positionality grants me access to nuanced insights and experiences that enrich the research, allowing for a deeper exploration of how school and system leaders perceive and navigate their improvement journeys. However, it also necessitates a rigorous methodological approach to ensure that my involvement in the system does not unduly influence the research outcomes. To address this, I have employed strategies such as reflexive practice and data triangulation to critically examine and validate my findings. Moreover, my role has enabled me to understand the importance of aligning strategic plans with the actualities of schooling in diverse and often challenging contexts, a central theme of this research.

By explicitly acknowledging and navigating my positionality within this research, I aim to provide a balanced and reflective account of school improvement efforts within a rural, regional, and remote Catholic Diocese. This approach not only enhances the credibility and depth of the study but also contributes to a more nuanced understanding of the interplay between system-led leadership and contextualised educational needs. Through this lens, the research seeks to offer valuable insights into the design, implementation, and evaluation of school improvement strategies, tailored to the unique contexts of regional, rural, and remote schools. However, before a rationale for undertaking this study can be provided, an explanation of the context surrounding the research problem merits exploration.

### 1.5 Defining and Describing Regional, Rural and Remote

In Australia, definitions of what constitutes a 'regional', 'rural' and 'remote' area have often played a central part in the psyche of the nation (Watson, 2014). Due to the geographic vastness of Australia, history, population, and distance from cities and regional areas have determined whether schools are viewed as being regional, rural and remote (Department of Education and Training, 2018). Another significant factor is the cultural features, whether that be expressed in terms of Indigenous connections or the elements of a rural mindset that define remoteness (Smith, 2016). Taken together, these sociological conceptions of 'remoteness' speak to the richness of cultural diversity and go further than constructed Australian stereotypes of the bush. The concept of remoteness thus incorporates more than simply a geographical location and its distance from any well-populated urban environment.

Importantly, it is also noted that cumulative disadvantage is particularly present in regional, rural and remote areas. As Riley (2009) argues, the widening inequalities in regional, rural and remote areas conceive of a struggle for economic resources as:

> contrast and disparity: between those living in opulence and those struggling with poverty; opportunity and restriction: between those who have access to employment and rich cultural experiences and those who do not; and location and dislocation: between those who have a sense of belonging, and those who live on the margins of society. (p. 53)

Furthermore, in qualitative research from Australia, Prowse (2012) explores the narratives of rural communities with "the association of decline and the country being a settled image in the public's imagination." (p. 85). Remoteness has both geographical as well as socio-cultural attributes, which are often characterised as a disadvantage. Thus, people living in regional, rural and remote areas have different needs to those living in an urban area, and this equally extends to the provision of schooling and educational opportunities.

### 1.6 The Economics of Disadvantage

As a major international agency that is influential in determining public and educational policy, the Organisation for Economic Co-operation and Development (OECD) defines disadvantage by examining household disposable income, and thus classifies disadvantage when "an equivalised household disposable income is less than half of the median prevailing

in each country" (2016, p. 102). This relative disadvantage is a determinant that the income of the family is inadequate, and thus the family is susceptible to economic circumstances that effectively restrict them from the average standard of living. The economics of disadvantage have been well-expounded by Piketty (2014), who states:

> … that the inequalities of wealth and income is shaped by the economic, social, and political actors view what is just and what is not, as well as by the relative power of those actors and the collective choices that result. It is the *joint product* of all relevant actors combined. How this history plays out depends on how societies view inequalities and what kinds of policies and institutions they adopt to measure and transform them. (p. 20; emphasis original)

This economic injustice often manifests as being detrimental to student learning, as it often produces students who exhibit "behavioural problems, alcohol and drugs abuse, physical and mental health problems as well as low levels of literacy" (Pirbhai-Illich, 2010, p. 258). Furthermore, it has been often argued, first by Max Weber, that "a child's earliest years fundamentally shape their *Lebenschancen* or life chances" (McLachlan, Gilfillan, Gordon, & Commission, 2013; Weber, 1946). As such, socio-economic status and family income correlates significantly with children's academic success, especially during the preschool, kindergarten, and primary years (Van Ijzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walraven, 2004). As we shall see, this linking of disadvantage and schooling success has significant implications for students from regional, rural and remote communities in Australia.

In Western societies over the last fifty years, the inequality between the haves and the have-nots has been growing (Lingard, 2008). It is important to acknowledge that student academic performance across many countries exhibits considerable inequality with respect to ethnicity, socioeconomic status (SES) and gender (OECD, 2015). Consequently, low student academic performance is associated with significant risks: exclusion from higher employment opportunities and salary, persistent disparities in health outcomes, and increased imprisonment among those in vulnerable groups (Nolan, 2015; George Smith & Smith, 2014). It is also well noted in the literature that when several types of disadvantage cluster together (e.g., ethnicity and rurality), disadvantage and risk compound (Kravitz-Wirtz, 2016; Schafer, Ferraro, & Mustillo, 2011; Yun & Moreno, 2006).

As part of a further sociological analysis, the concept of educational disadvantage has been extensively theorised and conceptualised by the British sociologist Basil Bernstein. Bernstein (1975) classifies *disadvantage* into the symbolic forms and representations of power relationships, as well as creatively emphasising the tensions of the reproduction of power through class relations. Thus, Bernstein (1975) states that disadvantage is promulgated "in the creation, distribution, reproduction, and legitimation of physical and symbolic values that have their source in the social division of labour" (p. 13).

From a similar perspective to Bernstein, the French sociologist Pierre Bourdieu has been influential for understanding disadvantage and how it permeates through society, education and schools (Bourdieu, 1984, 2006; Bourdieu & Passeron, 1990). Throughout his career, Bourdieu empirically researched the complexities of disadvantage and of the social conditions within which they are imagined. Bourdieu (1993) defined disadvantage in terms of a "process of inequality related to unevenly distributed assets or capitals in relation to particular fields that are social spaces of struggle" (p. 60). Similar to a Bernsteinian account, Bourdieu attributes those members of society who possess cultural, social and economic capital as reinforcers of advantage, who help ensure the continuing cultural hegemony of the ruling class (Bourdieu, 1986). Equally illuminating is the way in which Bourdieu (1984) elaborated on how members of the elite obtain advantage from those less advantaged by this accruement of capital. Thus, the concept of disadvantage put forward by Bernstein and Bourdieu has similarities that are bounded by power relationships, and consequently has an impact on education.

### 1.7 Educational Issues Associated with Remoteness

A key educational challenge associated with remoteness is captured in the views of Vedder, Horenczyk, Liebkind, and Nickmans (2006) when problematising the widely held expectation that "every student, regardless of its ethno-cultural origin, has equal chances for social and economic mobility" (p. 157). It is evident that the inequality between remote areas and urban areas is growing (Piketty, 2014) and this inequality includes educational outcomes such as social and economic mobility. For example, Arendt (1958) posits that global transmigration creates tensions for educators caused by contextual differences, such as the differences between remote and urban communities. This is to argue that there are inherent educational challenges and inequalities associated with schools located in regional, rural and remote areas and these are inextricably linked to enduring situational properties, such as geolocation, ethnicity, socioeconomic status and gender (Ball, 2010, p. 159).

In the light of these inequalities, the academic performance of students attending regional, rural and remote schools are likely to be significantly compromised by the specific geo-socio-cultural characteristics in which they live and learn (OECD, 2015). It is also acknowledged that lower student academic performance is associated with significant risks: exclusion from higher employment opportunities and salary, persistent disparities in health outcomes, and increased imprisonment among those in vulnerable groups (Nolan, 2015; G. Smith & Smith, 2014). This suggests that any educational inequality associated with regional, rural and remote education can readily lead to lower academic performance for a student while at school, and then significantly diminished career and well-being opportunities beyond their formal schooling.

Thus, with respect to this study, this brief introduction to the contextual influences upon schooling in regional, rural and remote locations of Australia posits that students living in these areas bring both their own academic needs and these broader contextual factors to their education. It is this challenge of fully acknowledging these complexities that provides urgent work for educators to understand and consider when proposing and implementing school improvements.

### 1.8 System Supported School Improvement

Historically, the sole principal has been viewed in the school improvement literature as an *administrator*; that is, one who supervises teachers and realigns power relations to implement change, in order to create an effective and efficient organisation (Rousmaniere, 2007). However, in the last 30 years and in line with market-based reforms, the principal's role has evolved to include elements of system leadership, which involves spreading examples of excellent practice, providing access to networks, and delivering professional support for the mentoring of teachers and future leaders (Fullan, 2005). The challenge now for system leaders is how to scale school improvement in a sustainable way amidst pressure from governments to implement legislated reforms (Hargreaves & Goodson, 2006). In an increasingly globalised and connected world, successive educational reforms emphasised that school quality should be determined by standardised and comparative testing of student outcomes, such as the OECD's *Programme for International Student Assessment* (PISA) (see Lewis, 2020). Consequently, school improvement has become somewhat universalised, as each school system introduces far more prescriptive expectations in this regard (Sahlberg, 2011). Hence, in the 21st century, school improvement has been led by school systems to improve learning and teaching: "this requires school improvement capability in 1) using

relevant knowledge from research and experience to 2) solve the complex educational problems that stand in the way of achieving improvement goals while 3) building relationships of trust with those involved" (Robinson, 2017, p. 2).

Thus, today's system leadership includes the responsibility for the oversight and implementation of school improvement for the schools within the particular system (Branson, 2009; Mills & Gale, 2010). Moreover, this responsibility incorporates the system-wide tasks of building the desire to address the challenge, strategic planning (Beresford & Gray, 2006), sharing the plan (Murphy, 2010), implementing the educational change (Fullan, 2016), seeking feedback (Maurer, 2013), and building collective ownership through staff voice, ideas and commitment (Dunn, Dastoor, & Sims, 2012). Central to the role of system leadership in facilitating such school improvement is the strategic direction of how to implement change across the whole system of schools with clear strategic directions, objectives and results (Stollar, Poth, Curtis, & Cohen, 2006).

In this policy climate, schooling systems received attention from The McKinsey Group in two highly cited reports, entitled *i) How the world's best-performing school systems come out on top* (Barber & Mourshed, 2007) and *ii) How the world's most improved school systems keep getting better* (Mourshed, Chijioke, & Barber, 2010). The second of these reports is most relevant to this research, as it considers the *implementation* of school improvement strategies, in which process is an integral part in improving systems and determining improved learning and teaching outcomes. Moreover, the report also acknowledged that whilst school improvement journeys and system contexts are unique, there is an associated clustering of school improvement strategies for schools with similar socio-cultural factors (Mourshed, Chijioke, & Barber, 2010). Taken together, school improvement strategies encourage system leaders and school leaders to establish a playbook in the planning, design, implementation and evaluation of school improvement strategies. In light of these school improvement strategies, it is accepted that systems can make a difference in providing support for reform efforts, as well as understanding the process of change to guide school improvement (Harris, 2013). Ultimately, system leaders and school leadership teams are required to bring about significant school improvement by increasing learning and teaching outcomes through the system-wide reform of school structures, processes and resourcing.

The role of system leadership was identified in the literature as a crucial component of school improvement strategies (Fullan, 2006; Fullan; 2009; Collarbone, 2009). It is essential to gain an insight of how system leaders implement and lead a system-wide strategy in

directing and supporting school leadership teams to improve learning and teaching outcomes. In this present study of a regional, rural and remote Catholic Diocese and its associated schools, it is critical to understand the role of the system in the design and implementation of a school improvement strategy, and how system leaders work to support the leadership teams and school staff to implement the strategy. Schools – and perhaps regional, rural and remote schools especially – rely on the system to build effective leadership, quality teaching and learning, pupil engagement, the use of data and critical friendship (Townsend, 2007). The challenge for school systems is then to balance the provision of such systemic support and guidance while, at the same time, allowing some degree of local autonomy and freedom to customise system-wide school improvement strategies, so that these better meet contextual needs.

### 1.9 Regional, Rural and Remote Education in Australia

In recent decades in Australia, Catholic systemic education has been transformed and evolved to become complex organisations that administer schools and school systems. In Australia, the constitutional arrangements of government school education are ultimately the responsibility of (subnational) state and territory governments, with education largely financed from state budgets (McInerney, 2003). In the same way, funding for the Catholic education system is overseen by state Catholic Education Commissions that work within the parameters of both government administration and Canon Law (Pascoe, 2007). Catholic systemic education is defined by its common values and principles and an agreed funding distribution model that can respond with flexibility to the needs of disadvantaged schools (Rymarz, 2013).

Additionally, the Australian Federal government provides a significant portion of funds to systemic Catholic education in Australia (Sherington & Hughes, 2015). Thus, the Australian Government is interested in evaluating how this money is spent in terms of accountability, transparency, efficiency and the improvement of educational outcomes for the students in Catholic schools. For example, Gleeson (2015) highlights how the Australian Government's educational agenda, in the form of policy objectives, accountability and measurable outcomes, are upheld in the integral reporting procedures in the Catholic education system.

Across the geographic area covered by this research, there are 24 Catholic schools that educate around 6,000 students, covering an area roughly the size of Portugal. The Diocesan Statement of Faith and Mission (Catholic Schools Office, 2012) outlines the

commitment to offering "quality teaching and learning which enables the education of the whole person. Though separated by distance our parish schools are connected through our Catholic faith and by the deep appreciation of the beauty of the natural environment" (p. 3). Furthermore, the *Catholic Schools Office: Strategic improvement plan: 2016-2018* (2015) (henceforth called the Strategy) states, "The moral purpose of education challenges everyone working in the schools of the Diocese of [..] to continue to provide a challenging and contemporary Catholic education for all students" (p. 3). At the core of the Diocesan Office is the aim to grow engagement, progress, achievement and wellbeing for each student, particularly in regional, rural and remote schools. As a response to assisting regional, rural and remote schools in the Diocese, the Catholic Professional Learning Community was developed and implemented in 2016. The Catholic Professional Learning Community (Catholic Schools Office, 2015) requires "(1) Catholic Principles and Values; (2) Student learning for all; (3) Teacher and student collaboration through inquiry and action learning; [and] (4) A results orientation that uses evidence of system, school, teacher and student improvement" (p. 3). From a similar direction, in the Diocesan Office, the cornerstone of school improvement efforts in the strategic plan involves building on the collective capacity of the schools to improve learning and teaching (Catholic schools office, 2015).

The introduction of the Strategy is reflected in the NAPLAN Year 3 Reading Score trends from 2015 to 2021 (see Figure 1.1). Figure 1.1, which shows the average Year 3 reading scores from 2015 to 2022, is a direct copy from official documents created by the School Performance Leaders. Its inclusion here is to visually represent the significant educational gains achieved under the Strategy, offering a concrete example of the progress made in this rural, regional, and remote Catholic Diocese. The graph illustrates an increase in reading scores, with a notable rise from 418.6 in 2015 to 445.7 in 2022, showcasing the impact of this school improvement journey. This upward trajectory in reading achievement signifies the collective efforts of the teachers, school and system leaders put into practice following the establishment of the Strategy. Figure 1.1 not only represents progress but also symbolises the effective application of the Strategy that has been employed, indicating a cohesive approach to school improvement.

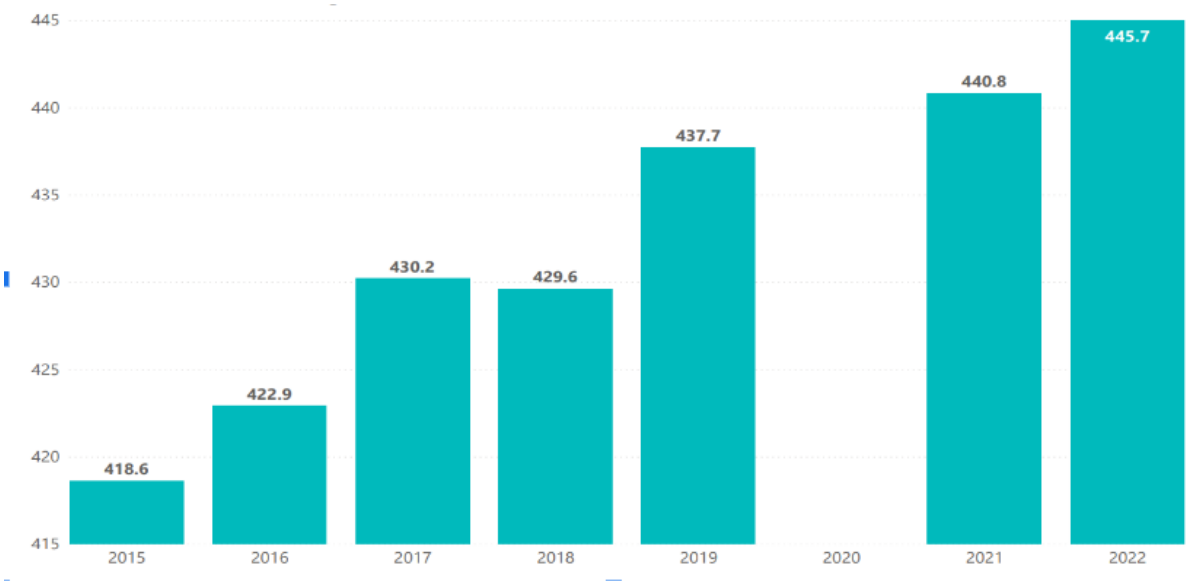



**Figure 1.1:** *Average Year 3 Reading Scores in Rural, Regional and Remote Catholic Diocese: Trends Over Time (2015-2022)*

Personally, as a school leader, system leader, and educational researcher, the rise in scores as depicted in Figure 1.1 spurred a profound curiosity about the underpinnings of these academic gains. It ignited a pursuit to distil the most effective components of the Strategy responsible for such striking results. This investigation, rooted in a desire to fathom and enhance these achievements, aims to surmount the unique challenges facing education in a rural, regional, and remote Diocese.

Reflecting upon the trends highlighted in Figure 1.1, Figures 1.2 and 1.3 serve to further contextualise the success of the Strategy within a broader, national framework. These additional graphs exhibit the comparative performance of the Diocese against other Catholic Dioceses across Australia, underscoring the exemplary achievement in NAPLAN performance for both Year 3 and Year 5 reading scores in 2022. These graphs were widely circulated within Diocesan presentations with teachers, school leaders and system leaders.

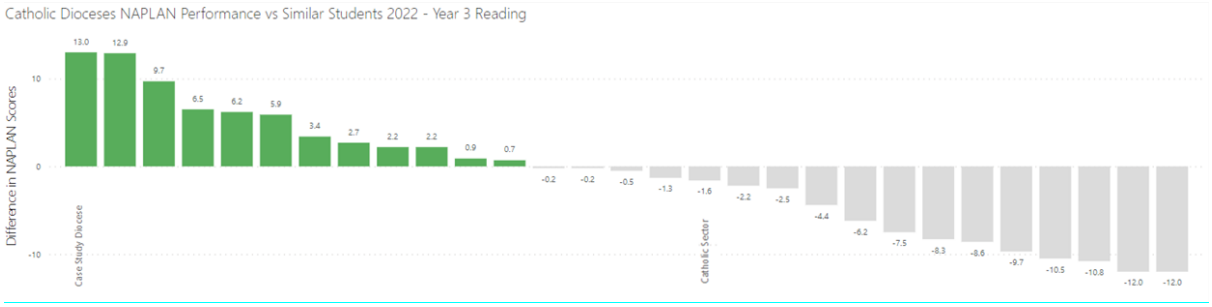
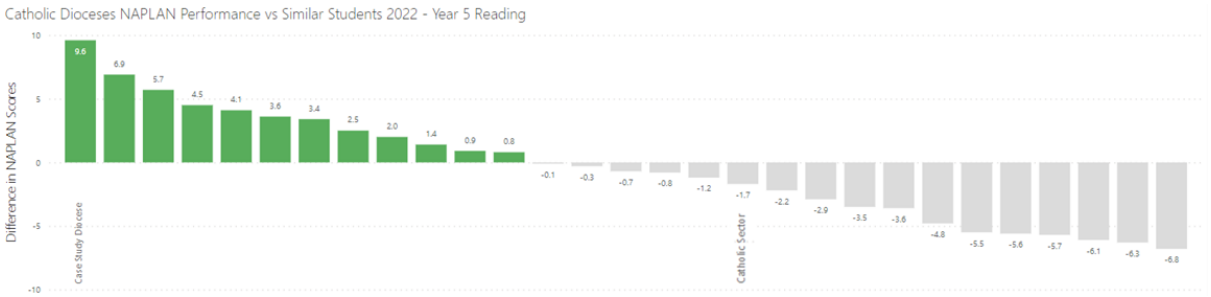



**Figure 1.2:** Comparative NAPLAN Performance for Year 3 Reading in 2022 Across Australian Catholic Dioceses

**Figure 1.3:** Comparative NAPLAN Performance for Year 5 Reading in 2022 across Australian Catholic




Dioceses

Our standing among Catholic Dioceses nationwide became strikingly clear through Figures 1.2 and 1.3. These figures revealed the rural, regional and remote Diocese at the pinnacle for both Year 3 and Year 5 reading scores, a revelation that served to challenge the misconception that our rural setting implied a lesser quality of education compared to urban counterparts. For instance, the year 2022 figures show our Diocese surpassing similar student groups by margins of 13.0 and 9.6 points for Year 3 and 5.9 and 6.5 points for Year 5, respectively. These data not only highlighted our academic achievement but also significantly shifted the internal self-perception of our system of schools—from an underdog mentality to one of possessing recognised leadership in literacy.

The usage of these graphs in various school and system leaders' forums has transcended beyond mere presentations of data; rather, they've become emblematic of a transformative educational narrative. They stand as testament to a shift from perceived geographic disadvantage to a celebrated story of excellence and benchmark-setting in the realm of literacy—a story now narrated with evidence of impact.

From a personal perspective, as a school leader, system leader, and educational researcher, the data presented here raises questions for me about *how* these educational gains occurred. This sparked my interest to identify the most effective elements of the Strategy that

could be responsible for the observed successes. My investigation into this is driven by a commitment to understand this progress, with the aim of addressing educational challenges in regional, rural, and remote communities. As we move into the sixth year of the school improvement process, my focus – and that of my fellow teachers, school and system leaders – remained on refining processes to maximise the evidence of impact for educators and students alike. Whilst largely academic in nature, this research is also deeply personal, as it underpins my striving to ensure that educational excellence is achievable for *all* students.

### 1.10 School Improvement in Regional, Rural and Remote Australia

As a response to assisting regional, rural and remote schools in one Australian Diocese in New South Wales, professional learning communities were developed and implemented in 2016. The professional learning community was designed "[t]o build the leadership capacity of all staff" (Catholic Schools Office, 2015). Indeed, the cornerstone of the project is to build upon the collective capacity of the schools to improve learning and teaching (Catholic Schools Office, 2015). Schools selected to participate in these professional learning communities have sought to collect student data on reading and writing levels to determine new cycles of learning and teaching. Thus, by establishing effective early years intervention in literacy and numeracy, system leaders hope that there was to be rapid school improvement within rural, regional and remote schools within this Diocese.

In 2016, the diocesan executive leadership team determined that the professional learning community fell within the broader remit of the Strategy. Lyn Sharratt, a Canadian expert in school improvement, was engaged as a consultant to guide school and system leaders in *how to implement change* that was to have an impact on learning and teaching. Here, schools were required to implement the '14 parameters' (Sharratt & Fullan, 2012) to evaluate the impact of teaching and leadership on the learning progress for each student. Briefly, the 14 parameters cover focus areas for leadership teams and are accepted as a sound technique to measure improvement.

In addition, schools also engaged with the Diocesan Data Ecosystem, a custom-built reporting system built using the Microsoft *Power BI* to evaluate and track student progress. Within the Data Ecosystem devised for assessing student achievement, several evaluative instruments function both independently and in partnership. For instance, the foundational "Best Start" metrics introduce teachers, school leaders and system leaders to the early stages of a student's literacy journey assessing phonological awareness and concepts about print. At the same time, the PM Benchmarks emerge as a focused diagnostic tool, with one-to-one

assessments that could identify individual reading proficiencies. Providing a broader view, the Data Ecosystem also categorises academic attainment across subjects with its “A to E” grading mechanism. Further depth is added by the Progressive Achievement Tests in Reading and Mathematics, spotlighting students' skills in the comprehending of reading texts and key Mathematical concepts. The NAPLAN test is an assessment of foundational literacy and numeracy skills set by the Australian government. Crucially, correlation analyses are employed to triangulate data from these reports, ensuring that the insights derived are robust and comprehensive. By doing so, the Diocese was able to harness the power of multiple metrics, not just in isolation but in their interrelatedness, painting a complete picture of student performance.

Hence, the Data Ecosystem played a significant part in school and system leaders being able to collectively access data to then infer and draw insights from contextual information about school and students. By synthesising these insights from the Data Ecosystem, school and system leaders were better able to understand student performance. This new knowledge about school and student performance meant that school and system leaders could aim for precision with tailored educational strategies (Diocesan Office, 2018). Moreover, the formation of Instructional Leadership Teams (ILT) was introduced as a key part of the Strategy to implement the Strategy with precision. The ILT comprised school leaders (principals, leaders of pedagogy, assistant principals) and system leaders (school performance leaders and subject matter experts) working together for school improvement (Diocesan Office, 2020). The ILT was responsible for overseeing the implementation of the Strategy and, most importantly, the teaching and learning processes within each school and across the system (Diocesan Office, 2020). As a part of the Strategy, schools participated in co-designed activities that were guided by the ILTs (Diocesan Office, 2021).

Indeed, developing a shared vision of the future by the ILTs during the school improvement process was seen to be crucial. The role of the ILT teams included building strategic capacity within leaders, developing project planning and management skills, presenting progress reporting to the school, and coaching and supporting the team (Diocesan Office, 2018). For example, the processes set up by the ILTs encouraged innovative ways of working, such as the analysis and benchmarking of data. To this end, there was engagement with a variety of co-designed processes, such as the mapping of stakeholders and co-developing *Gantt* charts that acted as a school improvement roadmap to schedule tasks across a school year (Diocesan Office, 2021). At the end of this process, a recommended course of

action was co-designed so that the school leadership team could then implement. The benefits of the process are creating a culture and developing a language for school improvement.

Subsequently, the product of school and system leaders working together was a co-designed annual improvement plan that was increasingly focussed on the needs of the classroom. The spotlight on the classroom meant that the experiences of teachers and students were central to the Strategy, and that annual improvement plans were created by accessing the voice of stakeholders, including teachers, school leaders (principals, assistant principals and leaders of pedagogy) and system leaders (subject matter experts, the executive director, and school performance leaders). As a result, there was a significant restructuring of the learning and teaching processes within diocesan schools, with a new focus on teaching within uninterrupted literacy blocks that could provide teachers with evidence-based practices, such as phonics instruction. (Diocesan Office, 2018). As of November 2023, the current school improvement processes are in their sixth year and the focus on school and system leaders in this regional, rural and remote Diocese seeks to ameliorate educational disadvantage. At this stage of the school improvement project, schools are working to implement change of processes to maximise the impact for teachers and students. As the school improvement journey is a focus of one regional, rural and remote Catholic Australian Dioceses, this research project draws on the role that system and school leaders have adopted in enacting system-wide strategies to drive progress in rural, regional and remote Diocese.

### 1.11 Theoretical Framework Change to Reflect More of a Learning Concept

This research utilises the methodology of the school improvement ecosystem to explore the concept of educational change within a rural, regional and remote Diocese. Furthermore, it explored the relationships that existed between system leaders and school leadership. Thus, the enactment of school improvement by school leaders and system leaders resulted in the two groups working together for school improvement to problem solve and to develop new ways of thinking and rethinking conceptual models of change. In the space of school improvement scholarship, methodologies have been developed in which the “use of appropriate quality improvement tools is seen to support quality improvement efforts” (Tan, 2022: p. 49). This incorporates organisational ecology methodologies, as well as critical reflection as a researcher to draw upon a network of voices from multiple points of view. Orelio (2020) critiques the researcher as a practitioner who is also able to recognise that dealing with problems depends very much on the culture that prevails in the organisation. For example, I have seen the effects of processes that have a positive impact on the regional, rural

and remote classrooms of Australia, whereby teachers are making a real difference to the young people that they teach. Thus, to equip researchers with a lens for organisational ecology is to enact educational change and to have a method that helps to identify problems as quickly as possible, to solve them sustainably, and to learn from them to benefit regional, rural and remote schools more broadly.

This research draws upon the organisational ecological approach to organisational change as offered by Branson and Maura (2022) to shed light on understanding how the systemic connections between school and organisation facilitates their abilities to reflect on what is needed for school improvement. Branson and Maura offer a deeper perspective “to represent the organisation as a whole to view the organisation as a whole and fully understand how it is that people are the organisation” (p. 4). Thus, the conceptual and theoretical methods employed by Branson and Maura will allow me to better understand how schools and systems facilitate educational change. Similarly, the Australian Government (2011) report, *Review of Funding for Schooling: Final Report*—colloquially known as the Gonski Report—states that the purpose and goals of research are to provide "tangible and measurable outcomes" (p. 7). This research intends to benefit the *development of education policy outcomes* by the implementation and integration of programs and policy; create a *higher quality workforce* by providing professional learning to assist schools in disadvantaged schools; and promote *risk reduction in decision making* by providing a comprehensive overview of change management strategies for educators.

### 1.12 Significance of the Study

In this wider context, this research will contribute to the literature on school improvement in several ways. First, it will address an urgent requirement to explore the impact of the outcomes of school improvement processes in rural, regional and remote schools. There currently exists a limited detailed exploration of school improvement in rural, regional and remote Catholic schools, and it is therefore necessary to see if the financial support that is being distributed to these schools is providing measurable school improvement. Secondly, it will contribute to the literature within school improvement by adopting symbolic interactionism as a theoretical framework (Creswell, 2009) and applying it to inform the extraction of patterns of processes, particularly in the way that school improvement is enacted within a rural, regional and remote Diocese. Thus, by the adoption of symbolic interactionism, it will seek to understand the viewpoint of the participants and their beliefs, values and insights about school improvement.

Thirdly, this research will contribute to the literature concerning rural, regional and remote and the way that system-leadership is contributing to school improvement by exploring the contextual factors of rural, regional and remote education. Finally, this research will be of importance to me, personally, as it coincides with my appointment as a system leader in a rural, regional and remote Diocese of Australia. Its findings will not only provide me with specific knowledge about how to lead school improvement in the system of schools but also how to best work with school and system leaders to maximise the learning culture for the students and teachers. My professional learning in this essential area of regional, rural and remote school leadership may also have a similar benefit for those school and system leaders leading other regional, rural and remote schools in the same and other systems.

### 1.13 Limitations and Delimitations of the Study

This research adopts a constructivist epistemological perspective, focusing specifically on 12 school and system leaders to understand regional, rural, and remote schools. Guided by the theoretical lens of symbolic interactionism, the study delves into the beliefs, thoughts, and processes of participants in this Diocese. As a result, the findings are specific to the schools within this Diocese and are not meant to be extrapolated to the broader context of all regional, rural, and remote schools.

The theory of symbolic interactionism places emphasis on individual perspectives and it does not intend to achieve broad generalisations (Yin, 2015) The implication for research is that symbolic interactionism requires the use of in-depth one-on-one interviews. Hence, interviews that are centred on the experiences of school and system leaders offer detailed, contextually-sensitive insights (Creswell, 2015).

While the scope and nature of the research come with these limitations, there is also a recognition of the boundaries of symbolic interactionism as a theoretical framework. The objective is to understand the relational dynamics of school and system leadership in rural, regional and remote schools and to conceptualise thinking, promoting reflexivity among school and system leaders. This facilitates their ability to "self-analyse, reflect, and make better decisions" (Heather, Gillingham, & Melendez, p. 427). The overarching goal is for school and system leaders to challenge their preconceptions about school improvement, thereby fostering a deeper understanding of the complexities of regional, rural and remote schools.

## 1.14 The Structure of the Thesis and Summary

In closing Chapter 1, the identification of the research problem centres on a school and system wide improvement strategy (hereafter, "the Strategy") within a regional, rural, and remote Catholic Diocese in New South Wales. I have designed the research questions to illuminate the ways in which school and system leaders have enacted school improvement.

I have commenced Chapter 1 with an exploration of the study, and this is then followed by a general overview of the literature. This literature included a definition of rural, regional and remote education (Watson, 2014), school improvement processes (Lingard, 2008), organisational ecology and implementation science (Branson and Maura, 2021). Tellingly, I focus on the pivotal roles played by teachers, school leaders and systems in improving educational outcomes as being particularly relevant (Branson, 2009; Mills & Gale, 2010). As this literature shows, it became evident that school improvement is a complex process influenced by contextual factors, such as educational disadvantage (Piketty, 2014).

As the subsequent chapters of this thesis unfold, I offer an exploration into the school improvement that occurred within this rural, regional, and remote Diocese. In Chapter 2, I will undertake an exploration of the literature, providing insights into the nature of school improvement processes. In Chapter 3, I will demonstrate the research methodology of the exploratory case study and the ethical considerations that guide this case study. In Chapter 4, I will present the case study, offering a comprehensive understanding of the context of the Strategy and the school improvement processes as observed through interviews and documentary evidence. In Chapter 5, 6, and 7, I will present the data analysis, collectively revealing the relationships and processes that influenced school improvement in this Diocese and introducing the concept of a school improvement ecosystem. Finally, I will draw this exploration to a close in Chapter 8, providing a summary of the findings and their implications. In Chapter 8, I will outline recommendations for future directions in enhancing educational outcomes within rural, regional, and remote contexts.

Together, in these chapters I aim to weave a narrative of how school and system leaders work together to enhance learning, teaching and wellbeing outcomes.

## Chapter 2: Literature Review

There are numerous salient challenges that must be overcome to achieve school improvement within regional, rural and remote schools. Addressing disadvantage is essential for those educators working in an era of fervent school improvement driven by the twin concerns of equity and excellence. There is a wealth of literature that seeks to define educational outcomes within the context of disadvantage: the multidimensional nature of disadvantage, and effective teaching and leadership practices (see Bourdieu & Passeron, 1990; A. Hargreaves & Fullan, 2012; Leithwood & Day, 2008; Lingard, 2008; Mills & Gale, 2010). There is value in defining this growing body of literature and the various conceptualisations of school leadership and school improvement, particularly in the context of regional, rural and remote schools.

In this literature review, the pivotal but complex role that system leaders and school leaders have in leading school improvement within regional, rural and remote schools will be considered. The growing rise in disadvantage shapes how system leaders address quality education in regional, rural and remote schools. System leaders' contributions to addressing disadvantage, and the role of evidence-based practice in system leadership discourses, are critical as educational leaders seek to drive school improvement. Hence, a literature review that considers the role of evidence-based research in education is relevant when exploring system leaders' decision-making processes and capabilities. In addition, this literature review will investigate the context and processes in creating effective schools that specifically address these multiple disadvantages.

This research is set against the backdrop of the recurring, and sometimes serpentine, debates about school improvement. It draws on the role that educational system leaders have adopted in enacting system-wide strategies to drive progress in regional, rural and remote schools characterised by disadvantage. As a critical component for tackling disadvantage, *Transforming our world: The 2030 agenda for sustainable development* (United Nations, 2015) points to "access to inclusive, equitable quality education and lifelong learning opportunities" (p. 13) as the means to alleviate disadvantage. In defining regional, rural and remote schools, the literature emphasises the increasing complexity of disadvantage complicated by the intersecting influences of geolocation, ethnicity, race, class, migration status, religion and other cultural indicators (Arendt, 1958; Bernstein, 1975; Sellar, 2015; Vertovec, 2007). Undoubtedly, these factors of disadvantage have an impact on classrooms

that filter through to educational systems, as educators grapple to accommodate the diversity of learners affected by these issues.

### 2.1 Research Problem

Within the context of school improvement, educators must address the need for providing an evidence-based practice for how schools can effectively cater for regional, rural and remote students. This analytical lens provides a bricolage of perspectives of how disadvantage is perceived and comprehended by educational leaders. Drawing on research from the perspective of economic disadvantage, the literature surveyed demonstrates that inequality of opportunity can lead to a disparity of social, economic and health outcomes (Carlson & Cowen, 2015; Parr & Timperley, 2015; Santamaría, 2014; Stiglitz, 2012; Wrigley, 2013). These cultural contexts demand creative, imaginative responses by educational leaders to grow student progress, achievement and engagement. This research will, therefore, evaluate the impact of regional, rural and remote contexts within schools on educational outcomes, and address the attitudes of key leadership stakeholders (school performance leaders/subject matter experts/school principals/leaders of pedagogy/teachers) that are necessary to drive school improvement.

Arguably, there is a strong emphasis in school improvement in Western societies for system-led leadership to be the catalyst for sustained educational change (Branson, 2009). The practices of system leaders and policymakers who develop system-wide responses for school improvement have been critiqued in the literature (Ball, 2008; Collarbone, 2009; Fullan, 2016; Hargreaves & Fullan, 2012; Lingard & Keddie, 2013; Madden 2021; Sugrue, 2009). Accordingly, there is much system-led leadership research that addresses factors in school improvement, such as utilising data to lead learning (Farrell & Marsh, 2016), or the promotion of an instructional school culture based on change (Kraft et al., 2015). Whilst arguing that system leadership is effective in promoting school improvement journeys, such conceptualisations focus on whole system improvement at a macro-level and the broader beliefs, processes and values that lead to educational change. Literature addressing the gap between system leadership policy discourse and the materiality and practice of school improvement is limited. As such, this thesis provides insights into how the evaluation of school improvement occurs in schools and raises questions of contestation or conflict between educational leaders and other school stakeholders.

## 2.2 Literature Review Strategy

To explore the literature, it was important to consider what theoretical framings may help inform the general context towards the research questions. The subsequent literatures reviewed and discussed in this essay are informed by initial areas of interest, based on my experiences as a school and system leader in regional, rural and remote schools. In this space, I felt that French sociologist Pierre Bourdieu was particularly influential in shaping my views during my Master of Educational Leadership degree, and saw particular value in how he saw the relationships based on the individual's access to capital and the structural inequalities of schooling. To commence, an examination of the literature was conducted concerning educational disadvantage and educational leadership, primarily emphasising the enhancement and efficacy of schools.

Subsequently, I undertook many informal conversations with key contacts (Executive director, school performance leaders, principals, CSNSW knowledge workers and educational academics who specialise in disadvantage), and consequently numerous promising topics emerged for further inquiry and exploration. These themes are interrelated rather than isolated; subsequent dialogues made it apparent that identifying priorities among the various participants in this discourse would be complex. Initially, a particular theme surfaced around educational disadvantage in the regional, rural and remote context and the role of the contextual backgrounds of students. What role can the school play in overcoming disadvantage? What role do teachers have in improving educational achievement? How might schools go about this? Second, what are the perspectives of system leaders and school leaders within disadvantaged schools, and how is disadvantage determined and addressed by effective school improvement processes at a system, school, and classroom level? And third, a theme developed around the change management and project management methodologies related to educational settings. Was this another example of the creeping managerialism that has permeated through educational leadership? It is well-documented in the literature that large change is notoriously difficult to both enact and sustain (Clement, 2014; Kurtz & Snowden, 2003; Lukacs & Galluzzo, 2014). As such, how do school leaders in regional, rural and remote schools view the forces of educational change?

These dialogues with critical colleagues and friends provided additional avenues of research to pursue. Embarking on my research, I delved deeply into key journals focusing on educational disadvantage, regional, rural, and remote education, as well as effective school improvement strategies and processes. To systematically guide my literature search, I

developed a table that outlined the key themes and their respective research questions and theoretical constructs. Table 2.1 summarises these strategies.

**Table 2.1:** *Strategies Employed in the Literature Searches*

| Background and context | Research Questions | Theoretical Constructs |
|---|---|---|
| Educational disadvantage | What evidence and processes have system leaders and school leaders used to evaluate the outcomes of catering for disadvantage? | Field theory |
| School improvement | How have systems leaders learnt from enacting school improvement within disadvantaged schools? | School improvement processes and theory |
| Effective teacher, school leadership and system leadership processes | How are relationships between system leaders, principals and primary leaders of learners conceptualised within disadvantaged schools, and with what effect? | Organisational ecology and implementation science |

In my research, I referred to “key journals” as those highly ranked based on the Scimago Journal Rank (SJR). The SJR metric offers a comprehensive measure of a journal’s influence and impact in its field by measuring the number of an author’s citations (Jacsó, 2010). Ultimately, the rationale for this approach was to enhance my knowledge of the subject, acquaint myself with experts in the discipline, and appreciate different academic journals. Beginning with an expansive initial dataset of 4,703 results, I refined the search to sources published post-1950. I meticulously selected search terms derived from the themes outlined in Table 2.1, such as *educational disadvantage*, *regional, rural and remote education*, and *school improvement processes*. Next, I strategically used the Boolean operator "AND" to focus on the most relevant terms. This approach led to a curated list of around 25 key journals and approximately 500 journal articles that I found insightful and relevant. I exhibited a preference for literature originating from Australia, Britain and Ireland, largely influenced by

my teaching experience in Australia, England and Wales, my family background in rural Ireland and the relevance to the context of the schools and schooling systems involved in my research. My experiences led me to a better understanding of the educational contexts within these regions.

A challenge I faced was making sure that I had sufficient coverage of the research in rural, regional, and remote educational frameworks. Comprehensive literature reviews, particularly in the *Halsey Review* (2018) and the *Slattery Review* (2021) on rural, regional and remote education, became invaluable assets. These reports functioned as checks and balances, allowing me to identify and address omissions in my literature selection. My inclusion/exclusion criteria highlighted English-language publications. During this phase, my writing desk was the dining room table, and the vista was one of sprawling paddocks of sheep. I found that this view evoked introspection about the purpose of education and subtly informed many of my thoughts about school improvement.

Lecy and Beatty (2022) posit that snowballing sampling in literature reviews is a strategy to pinpoint key nodes in vast information networks. In simpler terms, as researchers delve into a specific piece of literature, they uncover pathways to associated works, exponentially enriching their understanding of the subject. This concept resonated deeply with my approach, as I frequently unearthed new material from journals that broadened my horizon. I enjoyed the process of reading, writing and researching during the literature review. I felt that it was a time of creativity that stands out as a distinctive memory in my doctoral journey. I read key journals renowned for their contributions in the fields of education, educational leadership, and project management. As my familiarity with the literature grew, I strategically employed the snowballing technique. I emphasised key journals renowned for their contributions, such as *Educational Researcher* and *Australian Educational Researcher* in the realm of education, *School Effectiveness and School Improvement* and *Journal of Education Policy* for insights on school reforms, and *Educational Management Administration & Leadership* for perspectives on educational leadership. Additionally, while journals such *as Journal of Construction Engineering and Management* and *Discourse: Studies in the Cultural Politics of Education* presented concepts that I initially found challenging to grasp, I persisted in reading them. Their diverse perspectives and in-depth analyses significantly expanded and enriched my thinking.

In my research, I found time and again that the relationships between school and system leaders mirror the symbiotic relationships observed in a thriving ecosystem. Just as diverse species rely on mutual relationships for survival, so too do educational leaders depend

on relationships, professional networks, and collaborative learning teams. I thus opted for a narrative literature review, allowing for a deeper understanding of their unique roles and interconnected stories. This holistic approach, capturing the essence of the vast educational landscape, aligns perfectly with a phenomenological exploration, focusing on the lived experiences and delicate interdependencies that sustain the school improvement ecosystem.

### 2.3 Understanding School Improvement and Educational Disadvantage in the Literature

Since the 1960s, the history of educational disadvantage has been represented as an area of interest for teachers and school leaders, as well as educational researchers and policy makers. In this area, diverse themes have emerged related to addressing disadvantage in schools. Empirical evidence has tended to establish the significant nature and extent that race, class, ethnicity and gender have played (and continue to play) in student achievement (Ball, 2010; Oppedisano & Turati, 2015; Quinn & Cooc, 2015). These sociological factors are critical to consider in light of implications within schools or outside schools (Mirra & Morrell, 2011). Hence, a polarising debate emerged, in which the role of education has been to either reproduce or ameliorate existing inequalities (Cleaver, 2005).

In the last several decades, there have been numerous studies that have emphasised disadvantage in education across Western countries (Bakker & Amsing, 2012; Brunello, Fort, & Weber, 2009; O'Hanlon, 2016). The literature emphasises student achievement complicated by the intersecting influences of ethnicity, race, gender (Arendt, 1958; Bernstein, 1975; Sellar, 2015; Vertovec, 2007). With regard to student achievement, it has been widely accepted that a student's family background, including their economic status, is an important influence on the student's success, and there is a resulting disparity between students from low and high socio-economic backgrounds (Reynolds et al., 2014). Drawing on longitudinal student achievement data, Hillmert (2013) emphasised the student achievement gap between migrants and students of the host society in European countries. Results from globally representative studies have shown that the class, ethnicity/race and gender achievement gaps exist in many countries (Mullis, Martin, Foy, & Arora, 2012). Clearly, as well as addressing the education system, addressing disadvantage on a societal level is imperative in allowing students from disadvantaged backgrounds greater equality in education.

From a school improvement perspective, disadvantage research has garnered momentum, emphasising the impact of educational policies and practices. In defining school improvement, the National College for School Leadership (NCSL) (2017) has stated that

"school improvement is mainly concerned with the processes through which schools can raise standards: the changes they can make and the strategies they can use to improve pupil outcomes" (p. 3). Implicit in the field of school improvement is the established body of literature that has demonstrated the role that external factors to schooling have in reproducing disadvantage (Ball, 2011; Bourdieu & Passeron, 1990; Lingard, Knight, & Porter, 1993). For example, Takashiro (2017) noted that students who are from a disadvantaged background have "detrimental life effects on developing basic learning skills, learning competencies, parenting and child development, motivation, aspirations, expectations, and study hours" (p. 248).

However, this knowledge about the effects of disadvantage has always challenged policy makers and educators to develop solutions targeting educational disadvantage. In the United Kingdom, the Butler Education Act 1944 emphasised education reform of secondary schools (Middleton, 1972). After its implementation, there was research into educational disadvantage conducted by the London School of Economics, who initiated the Meritocratic System: longitudinal research into social mobility and inequality that highlighted the contextual factors outside of school that impacted learning. It found that these contextual factors were more important than school or teacher quality in affecting educational outcomes. Whilst post-war Britain was in a state of welfarism, the London School of Economics shed light on whether schools could eradicate disadvantage through meritocracy. In the 1970s, Bowles and Gintis (2002) furthered the research in developing the correspondence principle and concluded that "schools replicated inequalities by structuring social interaction and rewards to replicate the environment of the workplace" (p.7). This tradition continues today with researchers like Pasquetti (2017), who have suggested the linkages of disadvantage in schools as determined by post-colonialism and migration, race, class and precarity. Mel Ainscow's work further extends this conversation by focusing on strategies to foster equity and inclusion within the education system, emphasising the need for systemic changes to truly address the root causes of educational disadvantage (Chapman & Ainscow, 2022; Ainscow, Dyson, Goldrick, & West, 2012; Chapman, Ainscow, & Hadfield, 2020).

As a rejoinder to this bleak perspective, notable research has similarly been conducted that demonstrates how schools contribute to *reducing* inequalities. In the design, practices and resourcing of schools that catered for race and class, Ronald Edmonds was instrumental in the school improvement field. In a classic study, Edmonds (1981) defined the characteristics of how effective schools delivered "basic school skills to the full range of the pupil population" (p. 269). In more recent literature, Stattin, Svensson, & Korol (2019)

highlighted that school factors contributed “experience their schools as supporting environments to a greater extent than adolescents in advantaged neighbourhoods” (p. 383). Thus, it appears that if schools can avoid replicating the disadvantage milieu of society, there can be higher educational achievement.

To this end, growing inequality within society has had dramatic consequences for the nature of schooling in the twenty-first century. It seems there is a correlation between growing inequality and lessening educational outcomes (Mills & Gale, 2010). Hence, some commentators have argued that there have been global pressures on educational systems to quantify educational outcomes in high stakes testing, such as the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMMS) (Sahlberg, 2007). That has resulted in a greater convergence of educational policy and the (attempted) replication of notionally ‘high performing' educational systems (Au, 2013; Carlson & Cowen, 2015; Davis & Willson, 2015; Knoester & Au, 2017; La Londe & Verger, 2022; Schueler et al., 2022; Hodgen, Adkins, & Ainsworth, 2023). The results of these tests have caused consternation and anxiety for politicians and policy makers alike, as comparisons occur across countries in reading, Mathematics and Science (Adamson, 2012). For example, in defining PISA shock, Sellar (2015) underscored that the discourse around school performance "often focuses on rankings and narratives of success or failure, and the effects of this coverage on public debate about performance levels and the perceived need for reforms" (p. 139). While PISA does measure contextual factors, the primary contention is the weight it places on different variables (Lewis, 2020). The OECD tends to attribute the lion's share of differences in school performance to policy and practice factors rather than contextual ones. As a result, the underlying message becomes that 'good schools,' irrespective of their funding or resources, should be able to transcend disparities in student and community backgrounds to achieve comparable outcomes.

This perspective on school performance and student achievement is particularly significant when considering the influence of contextual factors in disadvantaged schools. As the literature suggests, the debate around standardised testing and its inherent one-size-fits-all approach has often magnified existing inequalities. Other studies point to the fact that these measures often do not account for the diverse backgrounds of students (Stone-Johnson, 2011), which implies that the context of rural, regional and remote as a factor in disadvantage needs to be considered.

## 2.4 Rural, Regional and Remote Literature

Between 2006 and 2015, a substantial number of Australian reports were published about regional, rural and remote contexts (for instance, see Commonwealth of Australia, 2009; Commonwealth of Australia, 2013; Commonwealth of Australia, 2016b; Human Rights and Equal Opportunity Commission, 2000; Lyons, Cooksey, Panizzon, Parnell, & Pegg, 2006; Vinson, Rawsthorne, Beavis, & Ericson, 2015). A significant exposition of regional, rural and remote education in Australia is that by John Halsey (2017). Halsey explored the challenges faced by students from regional, rural and remote backgrounds in Australia. A report that was widely circulated in the media and highly influential in policy circles, Halsey proposed eleven recommendations and fifty-three actions that needed to be considered by the government and those who advocate and work in rural education (Halsey, 2017, p. 4). Of note, the report outlined quite extensively examples of how to progress these actions. Consequently, Halsey's urgent contention was that there were essential components for rural communities to survive, prosper and be innovative places and spaces Australia requires. Unsurprisingly for those who live and work in rural communities, these components are bundled up in education. Halsey's robust report was to enable practical solutions for rural communities by having access to high-quality education, training and post-school options and pathways.

To this end, Halsey's (2018) extensive report, *The Independent Review into Regional, Rural, and Remote Education*, drew attention to the alarming disparities in educational opportunities and outcomes between rural and urban settings. Where this report is quite different from what has occurred in the past is that it emphasised the need for tailored approaches to rural education, where the access to quality resources and staffing remains a persistent challenge. Arguing for a more nuanced approach towards the definition of *rural*, Halsey noted that there is a deep sense of mythology associated with rural areas, and that any course of action is "likely to be more productive than simply concentrating on 'the problems'" (p. 10). I discerned from Halsey's perspective that this not only invites a reconceptualisation of rurality but also strongly advocates for the recognition of rural lifestyles and identities through hope, rather than the pessimism often that permeates sections of academic literature.

Throughout Halsey's report, the pertinent themes that emerge are the further suggestions that these recommendations identify "innovative and fresh approaches to support improved access and achievement of these students in school and their transition to study

further, training and employment" (p. 3). Moreover, Halsey strikingly argued that a "key challenge for regional, rural and remote education was ensuring, regardless of location or circumstances, that every young person has access to high-quality schooling and opportunities" (ibid., p. 8). Subsequently, Halsey proposed that the adoption of these recommendations could improve regional, rural and remote education:

> Together, the recommendations and actions encompass curriculum and assessment, principals and teachers, ensuring that students get the best start possible to their education, expanding VET and university opportunities and pathways, philanthropy and entrepreneurship, ICT, improving the support available to move away from home, and building a high-level national focus on regional, rural and remote education and training. (ibid., p. 5)

Whilst the benefits of Halsey's insights in setting out a comprehensive roadmap for enhancing regional, rural and remote education should not be understated, the real test is how these recommendations are understood and, in turn, implemented in rural, regional and remote communities. For meaningful progress, both system and school leaders need to enact Halsey's key recommendations, such as the adequate distribution of resources or the provision of professional learning, via a carefully designed planning, implementation and evaluation cycle. A key finding of my literature review posits that only with a focus on processes around implementation can we, as educators, hope to bridge the educational gaps for all students.

From a global perspective, the Organisation for Economic Development and Cooperation (OECD) has also critiqued conventional approaches to rural, regional and remote education, stating that these localities often face a pronounced educational achievement gap, with students frequently lagging behind their urban peers. The review cites that "rural students overall are not as successful as those who attend city schools", highlighting an urgent need for targeted educational strategies (Organisation for Economic Development and Cooperation, 2016, p. 205). International comparative large-scale assessments – such as the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) have highlighted an "urban advantage", whereby students in metropolitan areas outperform their rural counterparts. The OECD has reported that "children from poor households, ethnic minorities or rural areas are *significantly less likely* to make the transition from primary to lower secondary school and

from lower to upper secondary school, and are more likely to be delayed in their progression through the grade levels" (Organisation for Economic Development and Cooperation, 2016, p. 210; emphasis added).

In an Australian context, the National Assessment Program - Literacy and Numeracy (NAPLAN) is an annual assessment for students in Australia that tests skills in reading, writing, language conventions (spelling, grammar, and punctuation), and numeracy (Gable & Lingard, 2015). Both Trimble (2020) and Malloy (2015) have explored the utility of NAPLAN in Australian schools. Their contention is that the NAPLAN assessment is of value to schools in being able to maintain strong effective processes to resources schools enhance learning and teaching outcomes, and it can also provide schools and authorities with important information to support educational outcomes.

At a national level, the annual NAPLAN national reports indicate a decline in NAPLAN results that correlate student attainment with increasing remoteness. The findings reported by ACARA are troubling, with students in major cities achieving the highest mean scale scores, while those in very remote locations achieving the lowest (ACARA Australian Curriculum Assessment and Reporting Authority, 2016, p. 64). In the literature, this pattern of lower achievement persists across a range of student pathways, such educational milestones as year 12 completion and students attaining trade qualifications or university degrees (Mitchell Institute, 2015; Australian Government, 2015). It is important to note here that while national statistics present a clear relationship between location and educational outcomes, it is crucial to recognise that aggregated data can obscure more individual, school-level successes. It is these individual success stories of students, schools and systems that may offer great insights for improving education in regional, rural, and remote areas (see also Clark & Avery, 1976, p. 428). These variations highlight the importance of delving into micro-level data to uncover and replicate successful educational strategies in regional, rural and remote settings.

In New South Wales, *the Rural and Remote Strategy 2021-2024* was released as a key piece of policy architecture that highlighted staff recruitment and retention as significant challenges for rural, regional and remote schools (Department of Education, Skills and Employment, 2020). This policy document identified high teacher turnover rates and a reliance on less experienced educators occurred more frequently in these areas than metropolitan areas. The evidence from this policy document suggests that the enactment of the strategy is focussed on school alignment that promotes meaningful professional learning and support systems. In the context of rural education, a key point of celebration is that

schools can be seen as accelerators for career development among teachers and school leaders. Teachers in regional, rural and remote areas tend to attain leadership roles more rapidly than their metropolitan counterparts. As the report indicates, "rural schools offer accelerated career pathways, with teachers becoming leaders earlier in their career" (Department of Education, Skills and Employment, 2020, n.p.). This assertion is supported by data revealing that, on average, teachers and principals in outer regional, remote, and very remote areas achieve their first and second promotions with less experience and time spent at the school where the promotion occurred, compared to those in major cities (Department of Education, Skills and Employment, 2020).

Another influential piece of policy architecture at a national level was *the National School Reform Agreement* (NSRA) (Australian Government, 2022). This is a joint agreement between the Commonwealth, States and Territories to lift educational outcomes for all students. The NSRA is a crucial policy for government funding of schools (Australian Government, 2022). Significantly, the NSRA highlighted the significant data gaps that impact the fair distribution of government funding. Tellingly, this funding gap is a problem that disproportionately affects rural, regional and remote schools. Furthermore, a key insight from the NSRA is that the inadequacy of data impedes the precise evaluation of whether funding levels are meeting the actual needs of these schools. Citing an earlier report into Australian school funding, the NSRA states that the current measure of remoteness falls short in reflecting the complex reality of geographical isolation (Australian Government, 2018). It goes without saying then that these quite significant shortcomings in measurement can lead to challenges in delivering quality education and ensuring accessible educational opportunities for all.

It can thus be argued that amidst these challenges, the NSRA is a representation of the goodwill and the collective ambition of the government of Australia to at least strive for equitable education. However, the reality is somewhat bleak. The National Policy Initiatives (NPIs) under the NSRA have achieved limited success for a whole range of reasons, with research suggesting that the anticipated improvements in student outcomes have been hindered by delays in the implementation of crucial NPIs (Australian Government, 2022). There is a need to implement a robust and responsive strategy that can more effectively cater to the educational needs of disadvantaged and remote communities. The implications for the failed implementation of the NSRA is an uncomfortable landscape for communities.

Looking ahead, the NSRA is committed to establishing concrete and measurable targets for academic achievement. This commitment demonstrates that there is a certain

moral imperative to focus on supporting students from priority equity cohorts. Perhaps, the challenging point here is that for governments to ensure progress, the NSRA advocates that enhanced accountability measures need to be instituted. Yet, what is clearly stated in the literature is that comprehensive and transparent performance reporting is divisive and can be difficult to achieve (Lewis, 2020). However, if the NSRA's aim is to bridge the educational divide, these accountability measures and transparency of reporting needs to be fair, balanced and contextually sensitive. Ultimately, what is at stake is that there needs to be ways of achieving a lived reality where a high-quality education is both necessary and attainable for students in every corner of Australia, and especially in a way that transcends the barriers imposed by their geographic location.

Following these landmark studies, the Slattery Review (2021) was an essential document in the Australian Catholic schooling context, and particularly for regional, rural and remote students of New South Wales. My assessment is that Slattery's review embodies sound recommendations at a policy level to improve learning and teaching outcomes and student wellbeing outcomes that need to be heeded collectively by the Dioceses of New South Wales. According to Slattery, Catholic education needs to ensure schools have achieved equity *and* excellence in education, so that students can become successful, confident, creative and actively informed students. In this work, Slattery outlines,

> … [t]here needs to be a *change in mindset from a charity model to an equity model* when setting a course for improved outcomes in regional, rural and remote education. Bishops, CSNSW [Catholic Schools New South Wales] and Catholic School Agencies need to agree to a strategic model based on *equitable outcomes* for all students in Catholic education in NSW. Bringing planned investment through short and long-term collaborative and coordinated initiatives will bring equity and improved outcomes for all students, including those from regional, rural and remote areas of New South Wales. (ibid., p. 145)

These observations indicate the need for a combined response to build collaborative and trusting relationships as a vehicle for driving excellent and equitable student outcomes. Indeed, diverse contexts emerge from the literature, including the need to cater for Aboriginal and Torres Strait Islander students; curriculum and assessment; school culture and environments; and student and student engagement.

Responding to the Slattery Review (2021), Catholic Schools New South Wales released *Success in remote schools: A research study of eleven improving remote schools* (2021), which highlights seven main themes: (1) leadership is critical; (2) profound understanding of the importance of school–community partnerships; (3) a school culture built on high expectations for all students; (4) coherent whole-school approaches to evidence-based literacy and numeracy teaching; (5) building and sustaining teacher capacity to deliver whole-school practice; (6) empowering, supporting, and engaging Aboriginal and Torres Strait Islander students to enhance their learning capacity; and (7) making learning content engaging, accessible, and culturally responsive (National Curriculum Services, 2012). From a similar direction, according to What Works - The Work Program (2012), using data to lead learning in improving teaching processes is critical for enabling success for students in these more disadvantaged contexts. Additionally, the program is all about helping people in schools take systematic action to improve outcomes for Indigenous students. This draws upon 'what works' for Aboriginal and Torres Strait Islander students in a remote context but also could be argued provides the basis for all regional, rural, and remote students. 'What works' in this context refers to the strategies and approaches that have been found effective in improving outcomes for Aboriginal and Torres Strait Islander students in remote educational settings.

Of particular relevance to this literature review, Maddens' study (2024; in press) of professional learning in a regional Diocese evaluated the collaborative action research-based approach to whole-school improvement in a primary school in regional NSW, Australia. Analysis highlighted critical elements including alignment with improvement goals, teacher input, and school leadership's role in guiding data-driven decisions. Growth modelling showed increased student achievement, especially among students initially underperforming or with disabilities. Despite limitations, the findings emphasise the potency of data-driven decision-making, collaborative information sharing, and PLT meetings in guiding professional learning for teachers.

Nevertheless, another interpretation of regional, rural and remote education is advanced by Australian policymakers. Its emphasis rests in seeing students in regional, rural and remote areas form a unique cohort that includes students from every subgroup of disadvantage, and yet this is further challenged by the additional circumstance of living in an area other than a major urban centre (Smyth, 2021). Thus, there is a need for policymakers to be able to move funds to support the students. This interpretation anchors the Australian policy initiatives to build capacities for system and school leaders to support these students better to attain learning, teaching and wellbeing outcomes. Finally, school improvement

initiatives, and most prominently enhancing teacher and leadership capacity, also shed light on the notion of 'disadvantage' in regional, rural and remote contexts. Teacher quality improvement is further linked to improving professional learning activities (MacNeil et al., 2023). By launching professional learning as a critical school improvement strategy, Herbert (2021) highlights the need to capitalise on data analytics to gather and analyse large amounts of data, with these insights driving the improvement of schools in regional, rural and remote contexts. In the next section, I will articulate and define the doctrines of school improvement to better underline the effective educational processes within regional, rural and remote schools.

## 2.5 Effective Teaching Processes in Regional, Rural and Remote Schools

### *2.5.1 The Role of the Teacher in School Improvement*

In the field of school improvement, it is well-established that the teacher remains a central means for improving educational outcomes of their students (DuFour & Marzano, 2011; Hargreaves, 2014; Jurow & Shea, 2015; Lampert & Burnett, 2015). Of particular importance is the literature of teaching in disadvantaged schools, in which teacher quality is emphasised (Muijs, Harris, Chapman, Stoll, & Russ, 2004). Within an Australian context, the importance of teachers is highlighted within the Melbourne Declaration on Educational Goals for Young Australians (MCEETYA, 2008), which states that "excellent teachers have the capacity to *transform the lives of students* and to inspire and nurture their development as learners, individuals and citizens" (p. 11; emphasis added). This sense of emphasising the role of teaching and, in turn, teachers, as a key contributor to student learning has been taken up extensively in both research and more 'advocacy'-type publications.

For instance, the McKinsey Report – entitled *How the world's best-performing schools systems come out on top* (Barber & Mourshed, 2007) – recognised the instructional processes of teachers on increasing student achievement. In educational policy circles, the McKinsey Report into education has been influential for emphasising how the relationship between teacher and student is vital to the quality of teaching and learning (Barber & Mourshed, 2007). Moreover, Barber and Mourshed (2007) identified several strategies for improving teaching that included "coaching classroom practice, moving teacher training to the classroom, developing stronger school leaders and enabling teachers to learn from each other" (p. 26). However, it has also been extensively critiqued and problematised in critical policy sociology for potential neglect of context. There are a broad range of critics who argue that the McKinsey's report oversimplifies the challenges faced by educators (Neymotin,

2023; Savage, 2021). Neymotin (2023) acknowledges that whilst highlighting the importance of teachers is a key feature of the McKinsey Report, what gets overlooked are the challenges. These challenges include, but are not limited to, disparities between funding and the quality of the curriculums that students experience, not to mention the myriad social factors affecting students. This literature review emphasises the need for a more comprehensive understanding of the educational landscape that considers the unique contextual factors of different education systems.

In light of debates surrounding the McKinsey Report's recommendations and the critique it has faced in critical policy sociology, it is essential to delve deeper into what constitutes effective teaching. Hargreaves and Fullan (2012) have stated that effective teaching requires teachers who are "highly committed, thoroughly prepared, continuously developed, properly paid, well networked with each other to maximise their own improvement, and able to make effective judgements using all their capabilities and experience" (p. 3). It is not only the notion of teacher quality that is the issue, but also the "challenge of recruiting the very best teachers, preparing them to teach in particular kinds of schools, placing them in challenging environments, and supporting their teaching and careers in teaching" (Matsko & Hammerness, 2014, p. 130). In complex environments marked by disadvantage, the recruitment and retention of such teachers is a priority. As a case study by Yonezawa, Jones, and Singer (2011) highlighted, personal investment in teaching, typified by characteristics such as "hope, passion and the engagement in intellectual work" can help to create learning environments in which "teachers can continue to develop and share deep understandings of how students learn" (p. 914). Moreover, Yonezawa, Jones, and Singer argue that *resilience* is a disposition that has marked successful teachers in disadvantaged schools. This resilience had been developed by capabilities such as insight, independence, relationships, initiative, creativity, humour, morality, persistence, determination, and optimism (Yonezawa et al., 2011). In defining the characteristics of successful teachers in disadvantaged schools, Horn and Little (2010) have also suggested that "socio-cultural awareness, contextual interpersonal skills, self-understanding, risk taking, and perceived efficacy are required within the classroom" (p. 183). It is therefore imperative that if disadvantaged schools want to improve educational outcomes, teachers recruited to these schools need to be supported to develop and hone these desired traits.

Within the factors discerned as key for teachers in disadvantaged schools, social justice pedagogy is another critical dimension. This approach to teaching is embodied within a commitment to social justice (Noddings, 2010). At its best, social justice pedagogy has

promoted more equitable outcomes for students in disadvantaged schools, consistently progressing student resilience, wellbeing and social outcomes (Becker & Luthar, 2002). To this end, Mills and Ballantyne (2010) outlined that teacher education needs to:

> … promote the development of teachers who are socially just in their beliefs and practices. Exactly what this means, however, varies according to the "true idea" one holds of social justice, variously conceived as redistribution, recognition, representation, and capability. (p. 447)

Alongside the specialised knowledge and skills to effectively teach a range of diverse learners, we can see here how social justice pedagogy highlights the need to work in tandem to build positive and caring relationships within the school (Graham, Powell, & Truscott, 2016). Several researchers have explored the need for teachers to address the challenges of working in disadvantaged schools. For example, Nieto and Bode (2008) have advocated for teachers to appreciate the complexity of their schools, emphasising the importance of supporting the cultural habitus of students. In a similar vein, Cummins (1986) argues for teaching and learning that can empower students. Additionally, Towers (2022) has shed light on the daily responsibilities of school leaders, underscoring their vital role in providing guidance, support, and leadership to their schools. These scholars collectively highlight the significance of teachers developing a social justice core, which can, in turn, inspire them to teach in disadvantaged schools. As the research literature on teacher quality expands, addressing how individual teachers can best nurture their social justice commitment becomes increasingly significant.

### *2.5.2 Determining Teacher Processes in Regional, Rural and Remote Schools*

As educational researchers have adopted a focus on comparative and longitudinal educational outcomes, the apparent dichotomy between teacher (lack of) quality and (dis)advantaged schools has surged to the foreground of school improvement (see Clotfelter, Ladd, & Vigdor, 2007; Darling-Hammond, 2000). In this area of research, teacher quality was the number one criterion in Hattie's (2008) deployment of more than 800 meta-analyses. In this classic study, Hattie (2008) integrated "more than 50,000 individual studies and the resulting 138 factors were arranged according to six thematic groups and by effect size: the student, the home, the school, the curriculums, the teacher, and teaching and learning approaches" (p. 1). Numerous researchers, including Biesta (2021) and Nielsen & KlitmØller (2021), have contributed to a

growing body of critique directed at Hattie's research, highlighting concerns about its methodologies and underlying assumptions. Despite this critique, Hattie has retained a major influence in educational research and teacher practice over the last ten years (Arnold, 2011; Bergeron & Rivard, 2017; Zyngier, 2014). Social theorists such as Bourdieu and Passeron (1990) contend that factors affecting disadvantage (such as race, class and gender) need addressing by transformation of the *field* of the disadvantaged school. Whilst noting the importance of teacher quality, Coffield (2012) has expanded this idea by stating that "countries benefit economically from expanding education at all levels, but that the cultural, democratic and social goals of education are every bit as important" (p. 133). Thus, researchers must account for how to address disadvantages within and beyond the school, as well as seeking to improve the quality of teacher instruction.

So, what does successful teaching look like in disadvantaged schools? Day (2012) suggests that *ongoing teaching inquiry* is a key component, finding that an "'inquiry stance' brings context into the foreground and the specifics of students' learning into focus" (p. 177). Furthermore, he noted that teachers' participation through such approaches was to design and enact complex local, responsive and critical pedagogies and curriculums for, and with, groups of students. To improve the responsiveness of this thinking, they found that locality and identity were central to its successful implementation. In another case study from the United Kingdom, Demie and Mclean (2015) researched "the link between high-quality teaching and learning, and an inclusive curriculum" (p. 140). In their findings, they highlighted the effectiveness of using data to drive teaching processes, with decision-making being improved through using the data to prioritise "planning, reviewing activities including resourcing priorities, school improvement priorities, monitoring, evaluating, reviewing effectiveness of initiatives and strategies" (p. 168). These aspects of using data are primarily concerned with identifying underachieving groups to better provide targeted support.

Scholars of teacher education tell us that an understanding of instruction is needed if students are to improve (L. Anderson & Stillman, 2011; M. Lampert, 2010; Lesaux, Kieffer, Faller, & Kelley, 2010). Designing effective instructional practices that improves student achievement is therefore an essential "educational challenge that always demands attention" (Ng, Bartlett, Chester, & Kersland, 2013, p. 258). In a renowned quotation of educational psychology, Ausubel (1968) argued:

> … [i]f I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly. (p. 6)

Importantly, Carlisle, Kelcey, and Berebitsky (2013) noted the value of how deep, rich teacher instructional practices "that involves active processing and that challenges students' thinking is needed to support students' learning and contribute to improvements in student achievement" (p. 1,363). McKenna, Cacciattolo, and Vicars (2013) have similarly supported the argument of deep learning emerging from authentic learning experiences that incorporated skills such as higher-order thinking strategies and problem solving. Indeed, the dynamics of teacher instruction, including how student learning and teacher quality is defined, influence solutions that provide equitable learning experiences (Chubbuck, 2010; Hargrove & Seay, 2011).

Multiple qualitative studies have indicated that best practice for professional learning occurs when teacher training is situated *in the classroom* (Hodge, 2014; A. Kennedy, 2014; Leithwood & Seashore-Louis, 2011). For example, Cumming, Maxwell, and Wyatt-Smith (2016) demonstrated that "teacher professional development has by far the greatest impact on student learning of any other leadership activity" (p. 231). Several studies examining the role of professional development suggested that best practice involves evidence-based practice (Elmore, Fiarman, & Teitel, 2009; Greg Smith, 2014; Timperley, Wilson, Barrar, & Fung, 2007). Others have emphasised professional development being deemed "effective" by whether there are associated changes in school and classroom practices (Beabout, 2012; Greg Smith, 2014). Moreover, Desimone (2009) suggested "teacher learning and development within communities and contexts, a framework that includes vision, motivation, understanding, practice, reflection, and community" (p. 187) to increase capacity throughout the school to improve the quality of learning and teaching. According to Hardy and Rönnerman (2011), professional development must include "robust, collaborative inquiry amongst teachers into their work, [which] not only results in much more sustained student learning, but also leads to improved outcomes on more standardised measures of student assessment" (p. 464). Thus, the design of appropriately targeted professional learning will form an integral part of any measure to promote school improvement.

## 2.6 School Improvement: Pedagogical Models

Arguably, the role of learning and teaching cycles has an impact on improving teacher quality within school improvement processes. According to Darling-Hammond (1998), learning and teaching cycles have sought to bring a renewed focus on successful practices in the classroom to improve learning and teaching. This documentation is evident in the development of teachers' goals, the establishment of classroom contexts, and the measurement of student learning in ways that attempt to link learning to educational goals.

In a key area of educational research, Shulman (2004) introduced pedagogical content knowledge (PCK) – a conceptual model designed to provide structure and guidance for teachers in improving their teaching practice. This model addressed the need for a focus on the processes of teaching and learning in classrooms that will provide direction and, ultimately, improvement (Black and Williams 2010). Learning and teaching cycles are co-designed by educators and build on constructivist models of learning and teaching in the extant literature (Bransford, 2000; Curtis, 2016; Gess-Newsome, 1999; Tchudi, 1986). These interconnected areas are the basis of effective teaching and are vital for teachers in *all settings*, not just in disadvantaged schools. Hence, learning and teaching cycles are used to represent the real-life interactions between teaching and learning in the classroom. As argued in Singer and Moscovici (2008), learning and teaching cycles are based on "approaches to curriculum development support learning with understanding and encourage sense making" (p. 1,618) to focus on continual student assessments rather than an emphasis on teacher skills. It is important to view the process of planning, teaching and assessing as circular. First, teachers start by identifying prior learning and use the approved curriculum to develop a plan to accelerate student learning by asking such questions as "What do I do and how do I do this?" Second, teachers establish clear learning intentions and success criteria by using the curriculum to create and make clear and visible the success criteria, in which establishing learning goals for all students is an essential part of this process. Third, during the activation of multiple learning opportunities, Hattie (2012) states that teachers are encouraged to "teach multiple ways of knowing, interacting and opportunities for practice" (p. 183).

Next, depending on the direction of the lesson, feedback is given that provides students with progressive dialogue about their ongoing progress towards learning intentions and success criteria. At this stage, the Australian Institute of Learning and Teaching (AITSL) (2017) defined the purpose of feedback for teachers is to "identify and help continuously drive a student's understanding or performance towards a learning goal" (p. 5). In this context, the use of different levels of feedback as developed by Black and Wiliam (2010) are

valuable tools for students to understand the process of the task and learning, as well as encouraging the development of self-management skills. This is similar to Bauman (2008), where he described the "strategy of instrumental rationality, a process whereby information is gathered, processed and updated and changed" (p.182). Finally, learning and teaching cycles outlines and evaluates the impact of teaching, as this is essential in the process of teacher improvement. Hence, by evaluating the effect of teaching on student achievement and "the degree to which the educational product is in line with the goals and objectives" (Scherman & Bosker, 2017, p .2), teachers can have high levels of confidence in their teaching strategies and, importantly, a better understanding of how to improve their teaching practices. To achieve this, a review of the climate of the class is performed, whereby the learning experienced by students is evaluated by collecting students' perspectives on the impact of teaching. If learning and teaching cycles are meaningfully utilised in the classroom effectively, they provide an evidenced-based approach to what 'works best' in their specific education context, which has implications for teaching within classrooms in disadvantaged schools.

## 2.7 Effective School Leadership Processes in Regional, Rural and Remote Schools

### *2.7.1 The Role of School Leadership in Schools*

As we delve deeper into the role of school leadership in educational improvement, it becomes apparent that the context in which leadership operates plays a significant role. In recent scholarship, the literature in this field highlights the pivotal role that school leadership plays in school improvement (Harris & Harris, 2009; Leithwood & Day, 2008; Morrison, 2013; Robinson, 2010; Shapiro & Gross, 2013; Starratt, 1991; C. Sugrue, 2014). The framework of school improvement revolves around questions of how school leadership can (and does) impact learning and teaching (Spillane, 2017). Thus, the role of school leadership in school improvement involves implementing school-wide processes that are able to produce a measurable shift in educational outcomes. For example, Hallinger and Heck (2010) highlighted that school improvement requires "dynamic models that take into account changing relationships among relevant organisational processes over time" (p. 658).

In recent scholarship on school leadership in disadvantaged schools, major themes have emerged. These include *i)* a need for harmony between personal values, ethics, organisational culture and educational ideals (Watson & Reigeluth, 2013); *ii)* a focus on the culture of organisational learning within schools (Leithwood, Seashore, Anderson, & Wahlstrom, 2004); *iii)* the use of distributed leadership as a means for schools to shape

shared belief and values (Sergiovanni, 2015); and *iv)* efforts to ensure that the social, economic and political changes of societies are reflected within schools (Blenkin, Edwards, & Kelly, 1979). Moreover, this understanding can create inclusive school environments for a range of students, such as those at-risk of disengaging or who have disengaged from schooling, as well as students facing disadvantage (Mellor & Corrigan, 2004). This capacity for school leadership is especially supported by the findings from Leithwood, Harris, and Hopkins (2008) in their work on school leadership in schools, in which they recorded the following observations:

> 1. School leadership is second only to classroom teaching as an influence on pupil learning.
> 2. Almost all successful leaders draw on the same repertoire of basic leadership practices.
> 3. The ways in which leaders apply these basic leadership practices, and not the practices themselves, demonstrate responsiveness to, rather than dictation by, the contexts in which they work.
> 4. School leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions.
> 5. School leadership has a greater influence on schools and students when it is widely distributed.
> 6. Some patterns of distribution are more effective than others.
> 7. A small handful of personal traits explains a high proportion of the variation in leadership effectiveness. (ibid., pp. 27-28)

In essence, these key themes and insights from recent scholarship on school leadership in disadvantaged schools lay a strong foundation for advancing the understanding and practice of leadership that truly makes a difference in educational settings.

From a similar perspective and accentuating the responsiveness of school leaders in complex contexts, the contribution of Branson (2009) furthers our understandings of the relationship between the school leader and the environment. He argued that the participation in directed personal learning experiences, such as self-reflection in leaders, leads to a deeper understanding of the self and the environment. In a qualitative study conducted within an Australian Catholic school system, Branson determined that principals who engaged in structured self-reflection were able to come to an effective understanding of themselves, resulting in more effective leadership practices:

> [T]his process of structured self-reflection has enabled these principals to clarify their thinking, to raise their self-awareness, to get in touch with their inner freedom, and to develop more mutually beneficial professional relationships in their school communities. (ibid., p. 97)

The findings suggested that principals who demonstrated this type of self-reflection and viewed their mission as working in disadvantaged schools had considerable affinity with their school and its community, which suggests that their commitment to the school demonstrated a harmonisation of personal values *and* educational ideals. Moreover, the barriers facing disadvantaged school that these principals identified allowed them to better understand the intersection of race, class and gender as specific contributors to disadvantage. Taken collectively, we can see a focus on determining school leadership processes and its impact on educational change is an effective tool in catering for the needs of disadvantaged schools.

### 2.8 Determining School Leadership Processes in Regional, Rural and Remote Schools

In the literature of school improvement, determining school leadership processes remains a pervasive force within disadvantaged schools (Hallinger & Heck, 2010). This paradigm of maximising school leadership, based on talented and resourceful school leaders, is well noted in the literature (see Agasisti et al., 2016; Demie & Mclean, 2015; Watson & Reigeluth, 2013). The analysis of school leadership in regional, rural and remote schools requires processes such as instructional leadership and promoting a strong culture of learning to be present (Meyers & Hambrick Hitt, 2017). In the extant literature, Branson and Marra (2021) highlighted the role of school leadership in shaping various approaches to gain deeper insights into relationships and organisational ecological dynamics. These approaches emphasise adaptability and strategies for thriving in changing educational environments.

As Zbar, Kimber, and Marshall (2010) argued, the reality of school improvement is that strong leadership processes have long been a determinant of a school's success, highlighting the lessons of school improvement for disadvantaged schools "who punch above their weight" (Zbar, Kimber, & Marshall, 2010, p. 1). The authors contended that an essential prerequisite was that the school used equity funding to impact directly on student achievement; ensure that any 'performance tail' is identified and reduced; and ensure that individual student learning needs can be met. If disadvantaged schools are to improve the outcomes of their students, the school leadership processes must be instituted to direct and

contribute to this success. The model developed by Jones and Harris (2014) noted that the focus must be on a change management process that outlines a strategic direction, and then plans, implements, monitors and evaluates and reflects on the process. In naming what was essential, it is of interest that Jones and Harris acknowledged that communication with stakeholders (students, parents, teachers, school and system leaders) was critical. As these researchers viewed communication as providing the blueprint for the school to improve and move forward with new achievements. In discussing the intricacies of managing complex change, Fullan (2005) emphasises the importance of continual process improvement, highlighting the need for a comprehensive understanding of each step in the process. Fullan's approach states that there are key steps of continuous improvement. These key steps include understanding the dimension of time, the quality controls that are needed, the value of communication, and the dependencies of human resources. Furthermore, continuous improvement within a school environment has key processes and artefacts that could be produced to aid the implementation of the change strategy. Moreover, what these researchers identify is the need for deep thinking about school improvement to identify the complex factors that influence the school and the way that these influence the changing environment.

### 2.9 School Improvement: School Leadership Models

In the realm of school improvement, exploring diverse school leadership models is crucial for understanding how these frameworks support and enhance educational outcomes. Central to this exploration is the concept of distributed leadership, a model that emphasises the collective involvement and shared responsibilities of all stakeholders in the educational process (Spillane, 2005). This approach is particularly resonant with the principles of Professional Learning Communities (PLCs), where the emphasis on professional learning and dialogue among educators fosters a more collaborative environment. According to Spillane (2005), distributed leadership provides a lens through which the intricacies of school leadership, including the daily enactment of leadership routines, functions, and structures, can be more clearly understood and effectively implemented. Distributed leadership is framed through the complex interplay between school leaders, stakeholders within a school and the context of the school itself (Bush & Glover, 2012). A growing body of empirical evidence has also defined distributed leadership as the co-performance of leadership practices and the interactions that contribute to co-performance (Harris & Harris, 2009; Leithwood & Seashore-Louis, 2011). Inevitably, distributed leadership is about the patterns of distribution between and across schools with differential organisational outcomes (Timperley, 2005).

That said, while there might be a shared understanding of the benefits of distributed leadership, a comprehensive literature review conducted by Bennett, Wise, Woods, and Harvey (2003) noted there are differing interpretations on how distributed leadership can be practised. The most widely accepted view consists of three aspects of distributed leadership: *i)* to extend the reach and spread of leadership throughout schools (Hall, Gunter, & Bragg, 2013); *ii)* to influence a form of power which can be exercised by anyone in the organisation and is not confined to those holding formal leadership positions by the harnessing of the different expertise of the group (Robinson, 2010); and *iii)* that school leadership has a greater impact on student achievement when it is widely distributed and opened to the school community (Leithwood & Day, 2008). In contrast, Ayas and Zeniuk (2001) examined the significant socio and political dimensions of distributed leadership as school culture and found that schools are reshaped through truth, inquiry and trust. Finally, Harris (2008) focused on distributed leadership and its effects on student achievement, noting that it "is a notoriously difficult matter to measure, for it is not easy to isolate the direct effect of distributed leadership as an independent variable" (p. 139). Arguably, this is a flexible concept that can be interpreted and enacted according to the requirements and specifics of the school environment.

It is important to note that key strategies are needed to encompass the widening participation of school stakeholders in leadership. As argued by Martin and Gobstein (2015), distributed leadership provided "a focussed collaboration by a group of professionals to achieve better results based on shared learning" (p.490). However, whilst distributed leadership offers the horizon of wider participation, effective teams take time to build effective work habits, and there necessarily is no 'silver bullet' (Bennett et al., 2003). For that reason, King and Stevenson (2017) have argued that purposeful professional learning is needed to empower teachers "to develop their agency in ways that foster a genuine collective responsibility for pupils' learning and where teachers may transcend being functional implementers of the latest policy" (p. 658). Drawing on a longitudinal study in a disadvantaged school, Okilwa and Bruce Barnett (2017) investigated how an urban school in the US state of Texas sustained high educational outcomes for 20 years. The authors identified one of the causes of success as distributed leadership, an approach "that involves teachers, parents, and the community makes the work of turning around schools and sustaining academic excellence a more manageable endeavour" (p. 311). Looking at the issue from a different perspective, Gunter, Hall, and Bragg (2013) use a critical lens to deconstruct traditional frameworks of educational leadership, arguing that leadership roles are 'becoming

less distinct and more interconnected in terms of their purposes, rationales, and narratives' (p. 572). Furthermore, the authors expounded that the future implications of distributed leadership resulted in a "research agenda focusing on questions of power, risk and how schools are both understood and imagined" (p. 573).

Reflecting further on distributed leadership, Burnes (2009) discussed its role in driving organisational change. In this context, Hatch and Cunliffe (2013), as cited by Burnes (2009), emphasised that distributed leadership has the ability 'to create a democracy of enactment in which the process is made open and available to all, creating opportunities for freedom and innovation rather than simply further domination' (p. 376). In a related study, King and Stevenson (2017) considered the legacy of a literacy program in five disadvantaged schools in Ireland after distributed leadership was implemented. Moreover, King and Stevenson argued that the cultural changes experienced after distributed leadership are "the real agenda for school improvement" (p. 66). In the case of school improvement, the research has indicated that there is a considerable body of evidence to suggest that distributed leadership has a role to play in assisting leadership teams in disadvantaged schools. Furthermore, it is worth investigating the system responses to further compliment the effective school leadership processes in disadvantaged schools.

Some educational theorists, such as Biesta (2011), view organisational learning as a benefit to the school, whereby the acquisition of knowledge, skills and dispositions are essential to the development of a professional identity (Biesta, 2011; 2015), although this often demonstrates a value-free ideology that avoids categorisations of inequality and power conflict (Bourdieu, 1988). The ideals of organisational learnings focussed on the aspects that are needed for communities of professionals to improve (Wenger, 1998). It is a compelling perspective of scholarship that holds the professional learning community (PLC) as a source of much wisdom (DuFour & DuFour, 2013; Jones & Harris, 2014; Timperley et al., 2007). A PLC is defined by Wenger (1998) as "a sociocultural model of learning within a collaborative community context – the notion of collective learning in a community of practice" (p. 5). It is based on shared beliefs and understandings to prescribe community cultural norms centred around learning and collaboration (Flores, 2004).

Often, the literature on PLCs focuses on characterising learning in disadvantaged schools; for instance, Kennedy (2016) has argued the concept is "based on [a] more nuanced understanding of what teachers do, what motivates them, and how they learn and grow" (p. 974). Similarly, PLCs in disadvantaged schools can challenge the philosophy and practices of teachers and encourage teachers to develop into transformative educators (Skerrett &

Williamson, 2015). Writing from the perspective of social justice, Hill Collins (2010) has argued that a PLC:

> … constitutes both a principle of actual social organisation and an idea that people use to make sense of and shape their everyday lived realities. A conceptualisation that facilitates understanding of the changing-same nature of social inequalities endemic in diverse societies. (p. 10)

From a similar direction, Mintrop and Charles (2017) investigated PLCs in disadvantaged schools in California, whereby conventional models of PLCs had difficulty taking effect due to group formation under arduous conditions. Their findings suggested that PLCs could be characterised by "shared suffering, productive conflict, conversion of distress into collective meaning making and action, and the development of an embracing, solidary group identity" (ibid., p. 73).

### 2.10 Effective System Leadership Processes in Disadvantaged Schools: The Role of System Leadership

In the realm of educational leadership, the concept of 'system leadership' emerges as both a strategic policy influencer at the macro level and a pivotal role at the micro level, reflecting its dual significance in shaping and guiding educational policy and practice. Harris, Jones, and Hashim (2021) contribute significantly to this discourse, offering a comprehensive analysis that situates system leadership within three distinct yet interconnected frameworks.

> The contemporary evidence base views system leaders/ship as a macro level policy driver and a micro level role or responsibility. The literature reflects three distinctive but interrelated interpretations: system leaders/ship as system change...system leaders/ship for system change...[and] system leaders/ship through system change. (ibid., p. 387)

This delineation not only clarifies the multifaceted roles of system leaders but also underscores the dynamic nature of leadership in fostering educational transformation across different contexts.

At the same time, effective system leadership increasingly requires school leadership to deal with the implementation of educational policies, funding, management and curriculum

(Morrison, 2013). In the case of disadvantaged schools, school leadership needs to be progressed through the various architectures of innovation, implementation, meaning making, and capacity building (Branson & Gross, 2014; Moos, 2015; Wagner, 2012). Mutch (2004) has argued that system leaders need to comprehend that educational change is inherent in educational policy, and this must, in turn, prepare system leaders to effectively lead future-orientated schools in education. Educational change forces system leaders to develop responses to the intertwined imperatives of an excellence versus equity agenda, and how these contribute to reducing inequality (Darling-Hammond, 2010). Hardesty, McWilliams, and Plucker (2014) outlined other factors, such as the strategic use of resources in disadvantaged schools, as contributors to further reducing inequality. In an analysis of a longitudinal study comparing TIMMS data in Taiwan and the USA, Huang (2017) suggested that the reduction of the achievement gap may be related to system policies, but this will necessarily require school-level leadership and implementation.

In other professions, disruptive change has been embraced, such as within Information Technology companies working in Silicon Valley, and yet there have only been more incremental shifts in educational system leadership (Watson, 2014). Thus, a rethinking in educational settings is required to embrace processes and methodologies that can bring a deeper understanding to the forces of change and project management (Breakspear, 2021; Campbell & van Nieuwerburgh, 2017). Expanding on the insights of Hirst and Peters (2011), the concept of system leadership necessitates that the fundamental principles of education should continue to be the guiding force in addressing school improvement challenges in disadvantaged schools. Moreover, Holmes, Clement, and Albright (2013) have stated that a culture of learning and teaching is a necessary condition of providing equitable solutions in education (see also Raffo et al., 2009).

The concept of system leadership that exists in the literature has illustrated it is a growing phenomenon for the success and welfare of students in a formal partnership between schools (Gayle & Helga, 2009; Higham, Hopkins, & Matthews, 2009; Simon, 2015). Michael Fullan (2005) is often noted as defining system leadership in terms of sustainable education reform whereby a clear agenda for long lasting educational change occurs within the sphere of system leaders. Furthermore, Hopkins and Higham (2007) have defined those elements of system leadership that, “contribute decisively to a full range of government and local agendas by sharing of expertise, facilities and resources in educational specialisms, innovation and creativity, leadership and management, vocational education and skills support” (p.163). Boylan (2016) has described system leadership both as a, “descriptor and an advocated stance

in educational leadership for school improvement, leadership and teacher professional development" (p.58). This concept of system leadership has extended to include the quality and structure of relations of the system wide organisation. In this context, Finnigan and Daly (2012) have stated that this quality of relations is reflected in the "frequent interactions supporting the transfer of tacit, nonroutine, and complex knowledge" (p.42). Thus, system leadership can maintain credibility through collaborative and trusting cultures of a network of professionals.

Following the work of Glaser and Strauss (1967), Skerrett and Hargreaves used a grounded theory approach to research school leadership and system change in a large ethnographic study involving four secondary schools, in two countries, over thirty years (Skerrett & Hargreaves, 2008). Their research determined that system leadership weakened educational outcomes when system leadership relied on standardisation, a narrow focus on literacy and numeracy, and stringent accountability measures (Skerrett & Hargreaves, 2008). Therefore, system leadership needs to be grounded in evidence from research and practice and expressed in terms of improvements in measurable educational outcomes.

### 2.11 Determining System Responses to Regional, Rural and Remote

In the past decade, a wealth of school improvement literature in Western countries has been suffused with overcoming the effects of disadvantage (Meyers & Hambrick Hitt, 2017; Mills & Gale, 2010; Scanlan & Zisselsberger, 2015; Taylor, Joshi, & Wright, 2015; Terosky, 2014). On one hand, this thinking is designed to create socially just institutions but, on the other hand, it is arguably also to produce citizens who are productive, capable consumers (Kapstein, 2003). Scholarship broadly agrees that school funding processes are key to reducing stratification (Bénabou, 1996; Prasser, 2013; Thro, 2012), meaning that the world of economics is inextricably linked to the world of the classroom (Castro & Brawn, 2017; Giroux, 2011; Pizzolato & Holst, 2017). Another proponent of the link between education and disadvantage is the Nobel Prize-winning economist, Joseph Stiglitz (2019), who argued that the educational system promotes disadvantage through the stratification of schooling, resulting in unintentional outcomes such as racial segregation, increased school violence, or lower high school matriculation rates.From this perspective, Stiglitz (2019) asserted that disadvantage is shaped by "every aspect of our economic, legal, and social frameworks" (p. 12) and permeated "the education system and how it is financed" (p.12). In this light, Michael Apple has advocated for the rights of disadvantaged schools to demonstrate how their contexts are affected by a range of cumulative factors. According to Apple (2007), economic

disadvantage within schools has led to the "exacerbation of existing social divisions surrounding class and race" (p. 10). Such a view of disadvantage is synonymous with a form of education whose purpose was to replicate and reproduce the existing social order.

From a different perspective, Sahlberg (2007) investigated system leadership in Finland to try and explain its positive impact on PISA international standardised testing. In defining system leadership in Finland, he illustrated that it is an approach to improving educational achievement of all students that is based on a long-term vision and a set of basic values. Sahlberg (2007) has described system leadership as having three components: *i)* flexibility for school-based curriculum development based on existing best practice; *ii)* deep learning and teaching focus on a wholistic education for students; and *iii)*, a learning culture that values the professionalism of educators. This emphasis on system leadership aligns with the need for data collection and learning targets. Sahlberg saw value in the data gathered for standardised testing because it provided system leaders with information on "student characteristics, [the] effects of certain background variables, such as parents' socio-economic status, and the school environment" (p. 164). From a similar perspective, Maxcy (2009) has argued that the collection of system data and the setting of learning targets ensured "a much greater degree of responsiveness" (p. 513).

In this pedagogical context, Samu (2011) conducted a study in New Zealand and found the need for their educational system to possess the qualities "for community and system development to be more responsive to diverse learners" (p.183). Building upon this perspective, Conner (2013, p. 159) argued for the notion of an education system that developed more culturally congruent approaches to support:

> … learning and teaching as a more unified process; encouraging students to develop autonomy and agency by accepting personal responsibility for their own learning; facilitating student's affirming and learning from the knowledge and experience handed down by others; and promoting a holistic understanding of human development, particularly the importance of positive relationships and the influence of affective dimensions on belonging and a sense of identity.

These system wide approaches to education emphasise a wholistic approach to education that valued ethics, creativity, knowledge and skills, and is highly relevant to disadvantaged schools.

## 2.12 School Improvement Models: System Leadership Models

A common system leadership response to disadvantage is to implement comprehensive models of school improvement that are then adopted by local schools. This model of system leadership is to use "diverse reform designs focused in varying degrees on school structures, interpersonal communications, professional development, explicit use of diverse measures of success, and elementary or secondary school curricula" (Hopkins et al., 2014 p. 7). Still, continued academic success for most disadvantaged schools remains continually unobtainable (Gooden & Thompson Dorsey, 2014; Schechter & Ganon, 2012; Sutherland, Price, & Gonand, 2009). To this end, the challenge for system leadership is providing strategic resourcing for excellence and equity within a disadvantaged framework (Liou & Hermanns, 2017). A major educational reform that focussed on local district investment in Ontario, Canada, involved more than 5,000 schools and had a focus on narrowing the gap in student achievement in literacy and numeracy (Hargreaves & Ainscow, 2015). Also in Ontario, a study into PLCs by Hands, Guzar and Rodrigue (2015) highlighted the activities that enabled "community members to think deeply, to analyse their practice, and to devise ways to transform their practice in order to enhance student achievement and wellbeing" (p. 240). Furthermore, Fullan (2015) found that the Ontario reforms involved "continuous innovation in real time generated and assessed through co-learning (laterally within and across classrooms, schools and districts; and hierarchically school to district to province)" (p. 26).

It has been argued that a focus on the provision of a framework for school improvement requires examining the data concerned with inequality. As Masters (2009) stated in an Australian study, student performance on international testing was used to evaluate curriculum, pedagogy and assessment within Queensland schools, the purpose being to:

> … identify existing effective practices, to propose ways in which these could be scaled up, and to make recommendations for new strategies or initiatives for improving levels of literacy, numeracy and science achievement in Queensland primary schools. (p. 61)

As well as proposing higher spending in education through redistribution, which would assist schools in overcome achievement gaps, Masters similarly proposed that resources and processes be implemented to support school improvement. This research was to have

significant implications for system-level responses to address disadvantage, with this work evolving into the National School Improvement Tool (NSIT). Drawing on an international evidence-based research, Masters (2012) highlighted: an explicit improvement agenda; the analysis and discussion of data; a culture that promotes learning; the targeted use of school resources; an expert teaching team; systematic curriculum delivery; differentiated teaching and learning; effective pedagogical practices; and school-community partnerships.

Education systems in Australia have since been quick to adopt the NSIT to implement school improvement, and Masters has discussed the prospect of school improvement as encouraging reflection on evidence-based practice, which may involve school-wide analysis and discussion of student achievement and wellbeing outcomes. Data analysis at a system level required system leaders to identify schools that are demonstrating excellence in practice, as well as schools that are identified as making regressions, for the purpose of targeting school improvements. Masters (2012) has considered the environment that promotes this journey of school improvement as one that embraces a culture of learning. Here, school improvement is based on collegial trust, with schools working with openness with teachers, parents and community organisations to promote collaboration within the system (Blenkin et al., 1979). Taken together, the NSIT can identify what works best in schools and across school systems, providing a cornerstone that promotes effective pedagogical practice while also recognising teaching as the key to improving educational outcomes. Moreover, the NSIT assesses school improvement as being delivered by an expert teaching team comprising dedicated professionals and highly capable teachers that can influence classroom practices (Masters, 2009). This idea has expanded to include the role that teachers have in undertaking an active leadership role beyond the classroom.

Furthermore, in the case of system leadership within disadvantaged schools, the solution provided by the NSIT allows flexibility to cater for system responses that favour learning and shared inquiry. For example, Heffernan (2016) conducted a study that investigated the system responses to school improvement in three schools. This study is particularly interesting because it interviewed principals using the NSIT to explore their perceptions of external accountabilities and high stakes testing regimens (p. 379). This work also highlighted that NSIT incorporated “a concerted emphasis on the use of school performance data to drive school improvement” (p. 371). Therefore, an explicit improvement agenda has increasingly come to mean that school leadership teams must demonstrate more precision (i.e., being data-driven) in their focus. The work differentiates the benchmark and use of data that school leaders used when faced with school improvement challenges.

Similarly, and located at the system leadership level, Andrews, Conway and Smith (2017) evaluated an explicit school improvement agenda that was implemented in four Australian schools in concert with system leaders. In a two-year project involving group interviews, the authors found that both a school leadership *and* an explicit school improvement agenda were vital for delivering measurable educational outcomes. From this perspective, explicit targets were set for student achievement that enabled "more focus on individual student learning needs" (p. 54). Such actions had a direct result in establishing a culture of learning by delivering sustained curriculum implementation. By doing so, Andrews, Conway and Smith (2017) highlighted the need for time, processes and professional learning to improve teacher quality. In terms of lessons for school improvement, system responses to regional, rural and remote schools are essential in being able to leverage students' achievement and well-being outcomes.

### 2.13 Understanding the Organisational Ecosystem

To make sense of the relationships between school and system leaders within a rural, regional and remote Diocese, it is pertinent to turn our attention to the literature pertaining to the organisational ecosystem. Within the literature of organisational ecology, the classical definition proposed by a number of authors state that organisations are not static entities (Baum, 1996; Katz and Kahn, 1978; Haffar & Searcy, 2018). In this case study, the argument that organisations are continually evolving in response to the myriad of stimuli presented by their environments requires further discussion.

It is noted in the literature that organisational ecology represents a transformative lens in management studies (Baum, 1996; Branson, 2020; Kinchin, 2022). It is helpful to draw parallels with ecological principles, which can help to dissect the dynamic nature of organisational life. Therefore, organisational ecology, pioneered by scholars including Baum (1996), examines the relationship between an organisation's internal mechanisms and its broader environment, which is co-evolving and dynamic. Baum's seminal work (1986) elucidates that "socio-economic and political conditions [that] shape organisational diversity and evolution." (p.12) Here, the conclusion is that the influence of ecological dynamics on organisations is profound, and has both positive and negative characteristics and impacts. For instance, the defining of an ecosystem is a concept that frames nature as an "interrelated system of services on which human well-being depends" (Costanza et al., 2017). According to Mars and Bronstein (2018), theorists and practitioners sometimes turn to biological

concepts to help explain and categorise the complexities that shape and sustain organisational networks. Mars and Bronstein (2018) argue quite eloquently for the promise of the organisational ecosystem metaphor. For these researchers, there is an emphasis for scholarship to employ biological rigour in understanding these intricate systems. The organisational ecosystem is often described as an open living system (Kinchin, 2022). In considering these characteristics, the organisational ecosystem consists of elements that are difficult to examine when describing the interconnectedness with the environment and systemic dependencies (Katz and Kahn, 1978; Haffar & Searcy, 2018).

Another factor worth exploring is the influence of internal resources and capabilities on organisational behaviour. Hannan and Freeman (1989), for example, posited that resources have a large role to play in enabling or constraining an organisation. The implication for innovation is that a scarcity of resources impinges on an organisation's ability to grow and adapt. As Baum and Oliver (1996) articulate, technological innovation is "widespread and an effective business method employed by most firms to compete with others" (p.15). The compelling dynamics between resource availability (and scarcity) and its impact on innovation has been a well-studied area of organisation ecology.

### *2.13.1 Organisational Ecosystems: Layers and Dynamics*

This section highlights two complementary theories on organisational ecosystems. It puts particular emphasis on Bronfenbrenner's ecological systems theory (1977) and Branson and Marra's organisational ecosystem (2022).

Urie Bronfenbrenner's ecological systems theory provides a comprehensive framework for understanding the environmental influences that shape human development (Bronfenbrenner, 1977). The relevance of this literature is that it describes how daily workplace interactions are important, and by studying them, a better understanding of organisations can be obtained. This is particularly important for those interactions that influence strategy and processes. This theoretical approach is structured into five nested systems, each representing a different level of environmental impact. To put it briefly, Main (2023) articulated how Bronfenbrenner's ecological system theory can be outlined in the following components:

1. The model consists of five interrelated systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem.
2. The microsystem is the immediate environment and relationships that directly impact an individual, such as family, school, and peer group.

3. The mesosystem comprises the connections and interactions between different microsystems, such as the relationship between a child's family and their school.
4. The exosystem includes external environmental factors that indirectly influence an individual's development, such as parental workplace policies or community resources.
5. The macrosystem encompasses the broader cultural and societal forces that shape an individual's development, including beliefs, values, and customs. (p.1)

Of particular note is Bronfenbrenner's (2000) later refinement into the bioecological model. This model presents a shift in focus towards the processes and biological factors of humans and how that interacts with their immediate surroundings. The suggestion here is that this more refined model offers a more comprehensive position on the forces that drive human development.

To understand how ecological systems theory has profound implications for strategies and processes within education, a brief overview of the ecological systems is needed. In fact, the ecological systems theory suggests that educational strategies and processes should consider the multifaceted interactions between the school environment, the child's family, community influences, and broader societal expectations (Bronfenbrenner, 1977). Thus, a simple way to explain this is that educators and policymakers are encouraged to work closely together. Indeed, the common aim would be for school and system leaders to foster environments that support the child's development by strengthening the connections within and between the ecological systems. In sum, Bronfenbrenner's ecological systems theory offers a layered perspective on human development. One can see how a theory that offers the interconnectedness of personal, social, and institutional factors can remain persuasive in policy discourse. This theory remains influential in various fields, from psychology and education to social policy, predominantly because it provides appropriate solutions that are able to guide professionals in creating supportive environments for individuals at all stages of life.

### *2.13.2 Branson and Marra's Theory of Organisational Ecology*

Building on these ecological foundations, the seminal work of Branson and Marra (2022) envisions organisations as ecosystems where relational leadership fosters a culture responsive to the interconnectedness of its stakeholders. A central feature of this organisational ecosystem perspective (represented in Figure 2.1) is the nature of its relationships between

the various components within an organisation. This system provides a comprehensive understanding of how internal capacities and relational dynamics coexist with external environmental influences. This perspective facilitates a clear roadmap to understanding how these factors contribute to outputs such as performance and innovation.

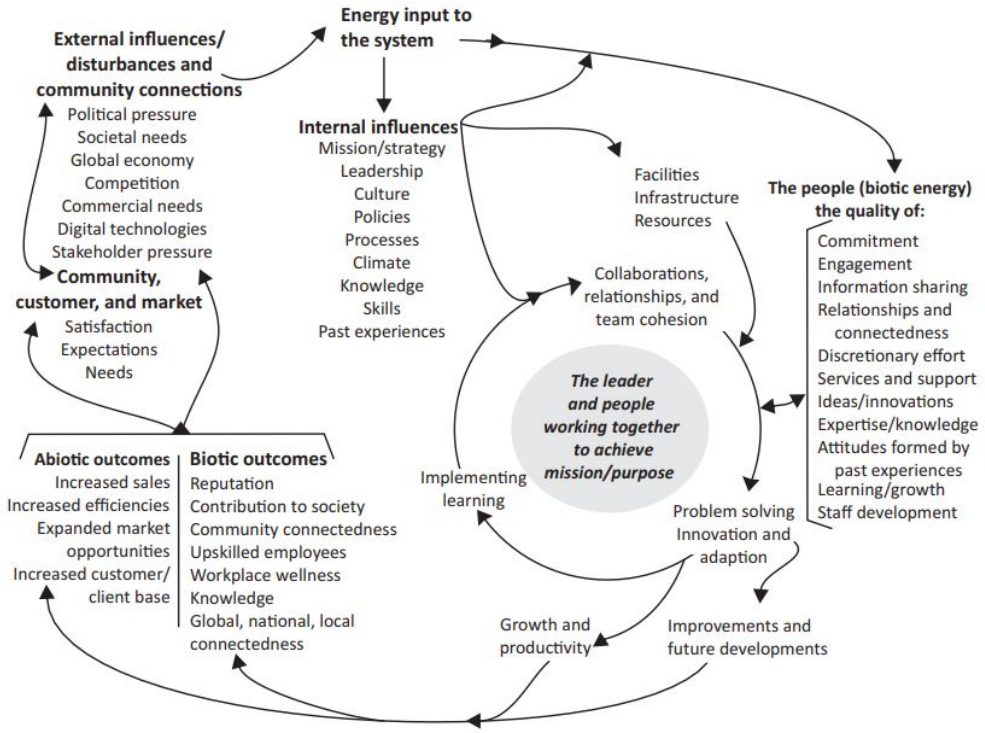



**Figure 2.1:** *Branson and Marra's (2022) Organisational Ecosystem*

In line with classic theories of organisational ecosystems, Branson and Marra's model is driven by energy inputs, which include external influences including political pressures, societal needs, economic factors, competition, technological advancements, and stakeholder expectations. In their model, these inputs interact with internal organisational influences. Indeed, these internal influences such as culture, leadership and the skills and experiences of employees are key drivers in enabling the ecosystem to flourish in a positive way, or likewise be diminished. Central to the model is the concept that there must be, "the leader and people working together to achieve mission/purpose," (p.4). This c*o-design* emphasises the collaborative effort required to drive organisational success. Furthermore, the people (or biotic energy) is perceived to be crucial for the organisation's vitality. There are good reasons for the qualities of the people to be emphasised because we can see how these qualities such

as commitment, engagement, information sharing and most of all relationships, directly influence the success and the overall health of an organisation.

What is the difference between biotic and abiotic outcomes in the organisational ecosystem? Branson and Marra show that biotic outcomes include improved reputation, societal contribution, community connectedness, employee upskilling, knowledge enhancement and global connectivity. In contrast, they define abiotic outcomes in the organisational ecosystem as ones that cover increased sales, efficiencies, market opportunities, and customer/client base expansion. At the organisational level, the diagram highlights the role of leadership in fostering a culture of collaboration and innovation. The suggestion here is of utmost importance in stating that the flow of ideas and shared efforts lead to both tangible business results (abiotic outcomes) and intangible cultural and relational benefits (biotic outcomes). Together, we can see how the two different sets of outcomes both contribute to the overall growth and productivity of the organisation. The model suggests that the manifestation of continuous learning, problem-solving and the capacity for innovation and adaptation is improved organisational health.

### *2.13.3 Leadership and Culture: The Heart of the Organisational Ecosystem*

Leadership's role in cultivating a culture that thrives on collaboration and innovation cannot be overstated. Figure 2.1 underscores leadership's pivotal position in channelling the collective efforts of the people towards both tangible business achievements and intangible cultural and relational gains. These dual facets contribute to the organisation's holistic growth, encapsulating the essence of Branson and Marra's (2022) theory.

*Translating Theory into Educational Process*

In an earlier pioneering work, Branson's (2020) approach to school review explores the relationship between organisational ecology and educational settings. To validate the findings, this key research was based around a school review process conducted in a school. Branson discovered that schools, much like ecosystems, are influenced by a myriad of relationships, internal and external factors. As a part of this school review, this exploratory methodology, followed on from Bronfenbrenner's (1977) ecological systems theory. The application of theory into practice was achieved by assessing the school's microsystem, mesosystem, exosystem, macrosystem, and chronosystem. This school review process identified and verified how leadership can promote a valuable culture of collaboration and innovation. Branson's method posits that "the role of leadership is pivotal," (p.3) and seeks to

create a feedback loop whereby schools continuously adapt and improve based on the interactions within and across its ecological layers. The results presented by Branson demonstrated that the goal of the school review process was to provide actionable insights to enhance the school's functioning and student outcomes. Specifically, this positions the researcher as an advocate for systemic and relational development strategies within educational policy and process. In addition, Branson's research calls for a shift beyond conventional performance metrics, advocating for a holistic assessment and enhancement of the school ecosystem as to better serve students and align with school improvement.

### 2.14 Implementation Science

In this section, I shift the argument from the theoretical underpinnings of organisational ecology to practical developments in the field. I will begin by delving into implementation science. *Implementation science* entails methodologies and strategies that apply research findings and evidence-based processes effectively within real-world settings. In the context of organisational and educational ecosystems, implementation science provides a framework for translating the collaborative, adaptive strategies fostered by organisational ecology into tangible improvements (Boudett, City, and Murnane, 2013). Typically, the application of improvement science leads to improvements in school operations and educational outcomes. This section will therefore explore how implementation science can bridge the gap between ecological theory and process. The goal is to ensure that the insights gained from organisational ecology are not only understood by school and system leaders, but also contribute successfully to school improvement.

Boudett, City, and Murnane (2013), provided the foundations for the Harvard The Data Wise Improvement Process (2013), which exemplifies implementation science *in situ.* Their process entails a disciplined examination of school performance data. This Data Wise Project highlights the need for school and system leaders to invest in processes such as building capability in teachers and leaders, as the data can potentially be used for purposes that provide rich insights into schools. The Data Wise Process encompasses an eight-step model that i) streamlines the assessment of educational processes but also fosters a ii) culture of continuous improvement. Many of the facets of this iterative process champion the need for collaborative work, building assessment literacy, and creating a data overview, all of which are aimed at improving instruction through the meticulous analysis of student data. Finally, this model exemplifies the necessity of an environment conducive to collective data analysis, enabling educators to identify specific problems of process with precision and

resolve. Importantly, the ability to create an action plan to identify problems is crucial for teachers, school and system leaders. The key to developing an action plan that is both responsive and adaptive is ensuring that the process is not only reflective, but also responsive to the needs of students; these are both key for a school to be able to move to the next level (Boudett et al., 2013).

Another key project that emanates from Harvard University is The Harvard Strategic Data Project (n.d). From a slightly different perspective, The Harvard Strategic Data Project furthers this methodology. Based on equipping educational leaders with robust tools to strategically leverage data, the purpose of the project is to allow school and system leaders the impetus to move beyond compliance and towards a more profound commitment to excellence (Harvard Graduate School of Education, n.d.). For example, the project encourages the strategic use of data to inform decision-making, and emphasises the necessity for school leaders and system leaders to think and operate in different ways. The contention is for school and system leaders to be not only consumers of data, but also critical analysts capable of discerning patterns and trends that influence educational outcomes. It is important to note that the imperative of harnessing data for the continuous improvement of schools is a multi-faceted endeavour, and one that demands a culture where collaboration and evidence-based analysis are paramount.

Bernhardt (2017) posits that for schools to evolve into genuine learning organisations, there must be a shift from a compliance-focused mindset to one deeply rooted in the pursuit of excellence. For this transformation to occur, the comprehensive use of data is a predictor of success. Factors such as rigorous analysis, communication, and deployment of multiple measures of data become the key features of the model. A further expansion of Bernhardt's vision for continuous school improvement is the concept of the learning organisation, where data serves as the fulcrum for informed decision-making within schools (Bernhardt, 2017).

Echoing this sentiment, Leslie's (2020) thesis on agile school improvement in a Catholic district in Canada describes the importance of engaging teachers in meaningful data and process strategies. Leslie (2020) argues for "a collaborative, short-term action planning protocol that enables teachers to engage in student-centred, collaborative, and impactful school and process improvement" (p. 21). In this spirit, Leslie's methodology advocates for a co-designed approach to professional learning. The purpose of this professional learning is for teachers to be seen not only as participants, but as co-leaders in the journey towards improvement. Complementing this view, Leslie (2020) introduces an authentic and adaptive leadership approach that interweaves two change models to create a *Dynamic Innovative*

*Generative* change framework. The Dynamic Innovative Generative Change Framework is essentially project management methodology for schools and has many benefits. First, the framework is pivotal in leading teachers through a system-orientated and locally adapted process. Second, the framework empowers teachers to assume leadership roles and to actively partake as co-creators in the school improvement process. Finally, the framework encourages short-term action planning, facilitating engagement in student-centred, collaborative, and impactful school and process improvement. Leslie's thesis has made a great contribution to the field of implementation science from a Catholic perspective.

Similarly, the work of Fernandes (2018) stands as a complementary piece in implementation science. In an Australian context, Fernandes' research delves into the complexities of leadership and the implementation of strategic *Total Quality Management* (TQM) within school systems. By fostering quality assurance and enhancement, Fernandes emphasises the transformation of schools into strategically orientated learning organisations (Fernandes, 2018). Notably, continuous self-assessment that drives educational quality and efficacy is a recent contribution to the field of implementation science.

Finally, *The Carnegie Foundation for the Advancement of Teaching* (2022) an influential organisation in school improvement in the USA. The aim of this organisation is to seek to alter the prevailing narrative surrounding data in education. They advocate for a more empowering perspective: they contend that data collection and measurement, when executed appropriately, can be not just informative but is also empowering for students, teachers and school and system leaders (Carnegie Foundation for the Advancement of Teaching, 2022, p.7). This reframing suggests a move away from the perception of data as simply a retrospective indicator, and instead advocates for its role as a proactive instrument for continuous improvement. The Foundation's emphasis on timely, insightful and liberating data reflects a transformative approach that could potentially reshape the culture of data utilisation in education (Carnegie Foundation for the Advancement of Teaching, 2022). The Carnegie Foundation's stance on data as a liberating force in education resonates with the overarching theme of empowerment. They articulate, "collecting the right data to inform our efforts can not only be informative but empowering" (Carnegie Foundation for the Advancement of Teaching, 2022, para. 4). This reimagining of data as an emancipatory tool rather than a source of anxiety reflects a paradigm shift towards a more constructive and enlightened use of data in education.

To conclude, the collective wisdom of these authors provides a scaffold for educators and policymakers to build upon the foundations of implementation science, aspiring to create a landscape where data serves as the catalyst for sustained and meaningful improvement.

### 2.15 Strategy Building Through Processes, Routines and Performances

If an organisation is to achieve sustained and meaningful change, it is essential to recognise the symbiotic relationship that occurs with the orchestration of such events. That is, how does the connection between strategy building and operational elements, such as processes, routines and performances, lead to sustained and meaningful change? Therefore it is necessary to ask key questions: 'what is strategy?', 'why is strategy important?', and 'how will strategy work?' to form the foundation upon which strategies are conceptualised. In addition, it must be considered that data serves as the driving force that shapes and steers the strategy. As Kinchin (20202) explains, the most power occurs, "when the supporting research is contextually relevant, drawing on evidence from deep understanding gathered from within institutional natural history" (p.15).

Hence, processes in strategy building are the collective, recurrent actions that define the flow of work within an organisation. These processes, when consistently applied, crystallise into routines. Routines are systems in flux, characterised by the performative aspect of actions and their ostensive patterns, as elucidated by Tsoukas and Chia (2022). People perform habitual actions that evolve into established routines, guiding organisational behaviour to navigate through system change.

Emphatically, the core of the relationship between process, routines and strategy is anchored in pinpointing data—the lifeblood of informed decision-making. In this context, processes are not merely sequences of actions but data-driven pathways that guide organisational behaviour (Fisk, 2019). The data illuminates the effectiveness of each process, revealing patterns and outcomes that, over time, become the basis for established routines (Trimble, 2020). These routines are essentially codified strategies that have been validated by data, reflecting best practices and lessons learned.

In summary, when organisations harness data effectively, they can craft routines that are not only efficient but also agile. In this way, data becomes a dynamic tool for continuous improvement, enabling the fine-tuning of processes in response to new insights. Understanding and harnessing the synergy between process, routines, and performances is vital for robust strategy building. Organisations adept in navigating this interplay can craft

and execute strategies that not only resonate with their core objectives but are also resilient and responsive to the shifting landscape.

### 2.16 Drawing Organisational Ecosystems and School Improvement Together

While institutionalism has occasionally incorporated the concept of organisational ecosystems, it has often overlooked the role of mutual constitution, where human agency plays a pivotal role in shaping these ecosystems (Branson and Marra, 2022). This gap has limited our understanding of how individuals interact within organisational ecosystems and the power dynamics involved. School improvement attempts to reintroduce individuals and schools into the study of organisational ecosystems. However, it remains constrained by the ecosystem context, sometimes neglecting the role of individuals and their daily experiences within these ecosystems.

In contrast, organisational ecosystem theory offers a unique perspective by shifting the focus towards interactions among different actors—individuals, organisations, and institutions—within the ecosystem. To bridge the gap between organisational ecosystems and school improvement, I think that we can consider the inherent agency in both perspectives. For instance, we can draw parallels between the implementation science in the context of *The Carnegie Foundation for the Advancement of Teaching* (2022) which involves using data to lead learning. These dimensions closely align with the creation, maintenance, and transformation of processes discussed within the context of organisational ecosystems. Additionally, Leslie (2020) shed light on the distinction between activity and process. While activities like daily tasks may lack deeper meaning, processes within organisational ecosystems provide order and meaning to these activities. This concept bridges the gap between individual processes and the creation of the ecosystem, addressing the limitations of implementation science.

Combining insights from the study of organisational ecosystems and improvement science, which emphasises the role of processes, and individual actions, offers a more comprehensive perspective. This approach allows us to explore the entire spectrum of change, from the earliest moments when new processes emerge to the later stages of theorisation and spread/scale within an organisational ecosystem. By integrating both perspectives, enabling a deeper understanding of how school and system leaders engage with these ecosystems to drive school improvement and enact meaningful change.

*Summary*

This section has offered a deep exploration of organisational ecosystems and their connection to continuous process improvement. First, there was an examination of the intricacies of organisational ecosystems, emphasising the interplay between actors, institutions, and processes. The discussion then moved to the role of school and system leaders in maintaining and improving processes within organisational ecosystems. The significance of data within organisational ecosystems was the next focus, underscoring its role in informed collaboration, ecosystem resilience, value co-creation, and ethical data governance. It emphasises the collaborative sharing of data expertise and technological resources.

Continuous improvement theory is another key theme, illustrating how it applies to process enhancement within organisational ecosystems. The theory's emphasis on ongoing evaluation and adaptation is highlighted, promoting operational efficiency. The relationship between process, routines, and strategy is explored, revealing their interconnectedness in strategy building. Continuous process improvement emerges as a valuable lens for optimising workflows and achieving operational efficiency. The literature review concludes by bridging the gap between organisational ecosystems and continuous process improvement. It stresses the significance of recognising agency within ecosystems and integrating insights from both perspectives to gain a holistic understanding of change and continuous improvement. In summary, this literature review provides a comprehensive exploration of organisational ecosystems and their interplay with continuous process improvement, offering valuable insights for professionals navigating the complexities of modern organisations.

## 2.17 Conclusion and Summary

### *2.17.1 Conceptual Framework*

To recap, this comprehensive literature review has shed light on the intricate relationship between school improvement and regional, rural, and remote education. It is evident that achieving school improvement in such settings is indeed a complex and formidable task. Nevertheless, within this complexity lie shining examples of success. The conceptual framework presented here (refer to Figure 2.2) underscores the critical importance of deploying effective process strategies across the spectrum of classrooms, schools, and entire educational systems to enhance educational outcomes. Figure 2.2, entitled 'School Improvement Ecosystem: Conceptual Framework', is my own analytical creation, designed to elucidate the mechanics of school improvement across various educational contexts. This framework integrates the insights gleaned from my research and the literature review,

highlighting the iterative nature of school improvement processes and the importance of a holistic educational ecosystem perspective. These knowledge process areas are seamlessly integrated into the broader change process and serve as integral components of the continuous school improvement journey.

## School Improvement Ecosystem – Conceptual Framework – Macro, Meso and Micro Level Approaches

| Level of Approach | Context | | Processes | | | | | Evidence of Impact |
|---|---|---|---|---|---|---|---|---|
| | Key Metrics | Description | Definition, Participants and Cycle | Phase 1 | Phase 2 | Phase 3 | Phase 4 | |
| **Macro** Leadership Processes | **Overall student achievement, Staff satisfaction, Community engagement, Effectiveness of implemented strategies** | • Measured through standardized testing, internal assessments, and progress reports for student achievement.<br>• Staff satisfaction can be gauged through staff surveys, focus groups, and regular check-ins.<br>• Community engagement can be assessed through surveys, attendance at school events, and participation in parent-teacher conferences.<br>• Effectiveness of implemented strategies can be assessed through performance metrics and feedback. | **Definition:** School and System-wide, overarching strategies and processes for school improvement.<br>**Participants:** System leaders, school leaders, teachers<br>**Cycle:** PDCA | **Plan: Timing and opportunity**<br>Defining objectives, strategies, and goals based on context and available resources. | **Do: Collaboration and synergy**<br>Working together to implement strategies and initiatives, leveraging the strengths of each participant. | **Check: Adaptation**<br>Evaluating progress, identifying areas for improvement, and making necessary adjustments. | **Act: Renewal and Replenish**<br>Continuously refining and renewing practices to maintain momentum and improve overall effectiveness. | **Improved student outcomes, increased teacher satisfaction** |
| **Meso** Co-teaching | **Degree of teacher collaboration, Availability and effectiveness of professional development opportunities, Sharing of best practices among staff** | • Teacher collaboration can be evaluated through observation and surveys.<br>• Professional development opportunities can be assessed through participant feedback and observing changes in teaching practices post-training.<br>• Sharing of best practices can be tracked and measured via performance metrics and feedback. | **Definition:** Collaborative processes and relationships among educators to enhance learning and teaching.<br>**Participants:** School Leaders, teachers and System Leaders<br>**Cycle:** Co-Teaching | **Co-planning: Iterative**<br>Collaboratively designing lessons, identifying learning objectives, and determining instructional strategies. | **Co-Teaching: Interconnected**<br>Jointly delivering instruction, leveraging each teacher's expertise to support diverse learners. | **Co-Debriefing: Collection and monitor**<br>Gathering, moderating and analysing data to assess student progress and instructional effectiveness. | **Co-reflecting: Abundance and quality**<br>Reviewing, discussing, and refining instructional practices to improve student outcomes and teacher collaboration. | **Improved teacher collaboration, increased student engagement**<br>**Improved correlation and accuracy of judgment with assessment** |
| **Micro** Effective Learning and Teaching Cycle | **Individual student performance, Student engagement, Classroom climate, Teacher effectiveness** | • Individual student performance can be measured through assessments and grading.<br>• Student engagement can be gauged through participation metrics and surveys.<br>• Classroom climate can be evaluated through observation and student feedback.<br>• Teacher effectiveness can be measured through student performance, feedback, and observation. | **Definition:** Learning and teaching processes focused on student outcomes and teacher effectiveness.<br>**Participants:** Teachers, School Leaders, and System Leaders<br>**Cycle:** Learning and Teaching Cycle | **Using data to lead learning: Source**<br>Gathering and analysing data to inform instructional decisions and target specific student needs. | **Targeted teaching: Flow**<br>Customising teaching to address individual student needs, promoting growth and achievement | **Focused feedback: Recirculation**<br>Providing timely, specific, feedback to guide student learning and inform instructional adjustments. | **Strong assessment: Balance**<br>Utilising diverse assessment strategies to measure student progress and ensure a balanced approach to teaching and learning. | **Improved student learning outcomes, increased teacher effectiveness** |

**Figure 2.2:** *School Improvement Ecosystem: Conceptual Framework*

This conceptual framework is intentionally designed to elucidate the mechanics of school improvement, focusing not only on its applicability in regional, rural and remote, but also urban educational contexts. It underscores the iterative nature of the school improvement process, central to school improvement endeavours. Furthermore, it meticulously delineates the pertinent knowledge areas, effectively guiding each phase of the transformative journey. Additionally, it underscores the value of adopting an educational ecosystem perspective, recognising the paramount significance of contextual factors in the regional, rural, and remote educational landscape, viewing it through the lenses of macro, meso, and micro levels. This perspective underscores the pivotal role played by the major stakeholders involved in school improvement, including school leaders (principals, assistant principals, leaders of pedagogy) and system leaders (school performance leaders and subject matter experts). The essence of this conceptual framework lies in understanding that the school improvement process is intricately interwoven with the dynamic interplay between context and leadership, co-teaching and effective learning and teaching processes and evidence of impact. Every element within this framework is interconnected, continually informing and influencing each other in an ever-evolving, cyclic pattern. Consequently, school and system leaders can harness these tools and strategies across various stages of the school improvement journey, ensuring a more holistic and context-aware approach to fostering educational excellence.

### *2.17.2 Research Questions*

This literature review has provided a foundation to explore the issues of school improvement and school effectiveness in regional, rural and remote schools. As outlined, the purpose of this research is to address the need for providing an evidence-based practice to inform how schools can effectively cater for regional, rural and remote students by exploring the effective processes that teachers, school leaders and system leaders use. This purpose led to my development of three research questions that direct the theoretical perspective and the further chapters.

*Research Question One: What evidence and processes do school and system leaders use to evaluate efforts to address disadvantage?*

To evaluate the outcome of catering for rural, regional and remote, it is necessary to first establish the desired results utilising not only student academic performance but also considerations from a wider perspective. This includes evaluating the experiences of stakeholders in rural, regional and remote schools to better understand the change dynamics

involved in developing a positive learning culture. This is a useful contribution to the field as current scholarship has no detailed evaluation of how educational leaders have identified and implemented school improvement strategies that influence not only students' academic performance and social outcomes but also, importantly, the wider community's engagement.

*Research Question Two: How do systems leaders learn from enacting school improvement within the specific context of rural, regional and remote schools?*

This question is designed to evaluate the context of this case study to investigate the way in which effective learning, teaching and leadership practices have become incorporated within rural, regional and remote schools. In this context, questions of excellence and equity resonate with issues of power and conflict. This analysis of the phenomenological perspective of change presents a contribution to the field, building on the work of Branson (2009) to focus on the role of ethics to lead educational change and school improvement.

*Research Question Three: How can the relationship between school and system leaders be conceptualised within rural, regional and remote schools?*

In developing this research question, it is important to note the role of system leadership in exploring the factors that contribute to rural, regional and remote. Therefore, this question explores the perspectives of system leaders and school leaders to determine how rural, regional and remote contexts are addressed by effective school improvement strategies. It will be necessary to ascertain the types of school improvement strategies employed by school leaders, as well as the evidence on which they are based and their ultimate effectiveness at being implemented and achieving the stated aims. By looking at the wider contextual factors of disadvantage, it will be possible to assess the influence of the interactions of system leaders and school leaders and their approach to educational change. Furthermore, these relationships, that are crucial to the implementation of educational change, are impacted by structural issues related to rural, regional and remote considerations and thus warrant detailed evaluation.

## Chapter 3: Methodology and Research Design

This chapter elucidates the methodology and research design, offering a thorough justification for and alignment with the chosen approach for investigating the research problem. In discerning the quality of this research endeavour, a deliberate effort has been made to employ a rigorous data generation process while adhering to an empirical approach consistent with the philosophical framework underpinning this research (Creswell, 2015). The scope of this research revolves around evaluating the responses of school and system leaders actively engaged in implementing change within regional, rural and remote schools. Employing a qualitative research approach, we delve into the pertinent literature on regional, rural, and remote education, as well as school improvement strategies at the teacher, school, and system levels.

My data generation methodology encompasses a multifaceted approach, ensuring the richness and depth required for a comprehensive understanding. This holistic process encompasses interviews, scrutiny of diocesan documents, maintenance of a reflective research journal, and the subsequent analysis of these materials. This approach allows for triangulation of data, ensuring the robustness and validity of the findings. Ultimately, this systematic examination extends beyond data generation, encompassing an iterative process of evaluation and reassessment. In this final phase, I revisit the conceptual framework, refining it to cultivate innovative school improvement processes tailored to the unique challenges of regional, rural, and remote schools.

In concurrence with the argument presented in preceding chapters, the fundamental purpose of this research is to explore how schools can effectively cater to the educational needs of regional, rural, and remote students. This exploration hinges upon an investigation into the processes and strategies employed by teachers, school leaders, and system leaders. These research questions, though stemming from the initial research proposal, have evolved through a comprehensive review of the relevant literature and empirical research within the educational setting. This iterative process, where theory informs practice and practice refines theory, reflects a deliberate effort to maintain alignment with the research's core objectives while adapting to the evolving research context.

In the realm of research methodology, it is imperative to identify an approach that best serves the objectives of the study. A research methodology entails working within a specific tradition to gain an understanding of the voices and perspectives that emerged during the research process (Creswell, 2015). As Crotty (1998) underscores, researchers must

navigate through a series of decisions to ensure the congruence between the chosen research methodology and paradigm and the researcher's onto-epistemic assumptions. This intricate process entails the meticulous establishment of a coherent and consistent epistemological framework, theoretical perspective, methodology, and method.

In the context of this research project, which squarely resides within the qualitative research domain, the research framework is articulated in Table 3.1 below.

**Table 3.1:** *Research Framework of the Study (adapted from Crotty [1998])*

| | |
|---|---|
| EPISTEMOLOGY | Social constructionism |
| THEORETICAL PERSPECTIVE | Interpretive<br>Symbolic interactionism |
| METHODOLOGY | Exploratory case study |
| METHODS | Semi-structured interviews<br>Documentary studies |

Building upon Crotty's foundational work, Merriam and Tisdell (2015) highlight the role of researchers in interpreting how individuals derive meaning from their experiences. This interpretive perspective underscores the importance of understanding participants through the lens of interpretation and construction of their experiences. Merriam and Tisdell further posit that qualitative research, when executed with rigour and precision, can contribute to the refinement or expansion of existing theories. In this regard, the findings of a study can be seen as an organic extension of the chosen epistemological and theoretical perspective, thus significantly enriching the knowledge base (Merriam & Tisdell, 2015).

The perspective presented here aligns seamlessly with Kozleski and Artiles (2015), who emphasise the utility of methodological tools in fostering researchers' reflexivity. Kozleski and Artiles assert that the chosen methodology serves as a mediator, shaping how researchers perceive the intricate landscape within which they work. It assists them in defining their problem spaces in a manner that acknowledges and navigates the inherent complexity of the educational terrain (Kozleski & Artiles, 2015).

In the ensuing sections, I delve deeper into the research strategies, methods, and the ontological and epistemological positions that collectively constitute the cornerstone of this research endeavour.

### 3.1 Identifying the Research Strategy: An Exploratory Case Study Approach

This research investigated how system leaders and school leadership teams enacted school improvement within regional, rural and remote schools. Specifically, qualitative methodology in the form of the exploratory case study was employed. In defining an exploratory case study, Yin (2017) highlights the responsibility of the researcher to "discover theory by directly observing a social phenomenon in its natural form" (p. 238). He deftly conveys the example of Christopher Columbus to assert the subsequent observation:

> When Christopher Columbus went to … ask for support for his exploration of the New World, he had to have some reasons for asking for three ships (Why not one? Why not five?), and he had some rationale for going westward (Why not south and then east?). He also had some (mistaken) criteria for recognising the Indies when he actually encountered them. In short, his exploration began with some rationale and direction, even if his initial assumptions might later have been proved wrong. This same degree of rationale and direction should underlie even an exploratory case study. (p. 22)

As there may be unforeseen findings during case study, Yin (2012) highlights the flexibility offered by the *exploratory case study*, as it allows the researcher "to investigate one or more issues" (p. 3), and in ways that are not always predictable at the outset of the research.

In the pursuit of understanding how system leaders and school leadership teams enact school improvement initiatives within regional, rural, and remote schools, the selection of a qualitative methodology, particularly in the form of an exploratory case study, is highly justified. The phenomenon of school improvement in these specific settings is notably intricate. It encompasses a myriad of factors, including cumulative disadvantage, geolocation and unique contextual challenges. A qualitative approach is best suited to unpack the complexity of this phenomenon, as it allows for the in-depth exploration of multifaceted decision-making processes, school and system leaders' processes, and the interplay of contextual variables.

Qualitative research excels at providing a nuanced and comprehensive understanding of the subject matter. By engaging directly with the system leaders and school leadership teams in these regional, rural, and remote schools, I can delve deeply into their perspectives, experiences, and decision-making rationales. This depth of insight is pivotal for grasping the intricacies of school improvement efforts and gaining an authentic understanding of the challenges and opportunities these schools face. The choice of an exploratory case study design closely aligns with the research's exploratory nature. This approach resonates with Yin's (2017) assertion that such studies are particularly valuable when the goal is to, "discover theory by directly observing a social phenomenon in its natural form" (p.23). Therefore, a qualitative approach is well-suited to generate new theories, hypotheses, and insights, thereby contributing significantly to the existing knowledge base.

Qualitative research methods are particularly well-suited for exploring the contextual factors that exert a profound influence on school improvement efforts. In regional, rural, and remote schools, the context plays a pivotal role in shaping educational practices. Qualitative approaches enable the study to be deeply embedded within these unique contexts, ensuring that findings are contextually sensitive and rooted in the lived experiences of the participants. An inherent strength of qualitative research is its flexibility. It allows for adaptability in research design and data generation strategies, which is essential when dealing with dynamic and evolving environments such as educational settings. This flexibility ensures that the research remains responsive to emerging themes and unexpected findings. Rigorous qualitative research methodologies will be employed to enhance the validity and trustworthiness of the findings. Techniques such as member checking, peer debriefing, and systematic data analysis will be employed to ensure the research's credibility and reliability.

In conclusion, the choice of employing qualitative methodology in the form of an exploratory case study is a deliberate and well-justified decision. It is aligned with the research's objectives, acknowledging the complexity of the phenomenon, and offers the best approach to authentically and comprehensively explore how school improvement is enacted in regional, rural, and remote schools. This approach not only resonates with established research methodology principles but also holds the promise of making a substantial contribution to the field by generating new theories and insights. Therefore, the exploratory case study is a useful vehicle for investigating the multiple complex connections and assumptions that undergird school improvement in disadvantaged schools, which will allow a more precise knowledge of the 'how' and 'why' of the way such processes operate in rural, regional and remote schools. This will also allow my own experiences working as an

educational leader in such settings to be challenged by the unanticipated encounters of empirical research.

In defining the researcher paradigm through the layering of perspectives, Harreveld and colleagues (2016) state that "ontology (nature of its reality), epistemology (the relationship between the researcher and reality), axiology (values underpinning the ethical stance of the research process) and methodology (how to go about investigating what could be known" (p. 2) are all parameters that help define the research prism. Thus, the research strategy adopted is essential to ensuring the "'why' behind the methods of data collection and analysis … [can] encapsulate the actuality of experiences" (p. 2). In ensuring that the bricoleur of the researcher explains the context of the situation, the social environment, the topics, assumptions, experiences, and perceptions within these multiple, constructed ontological realities need to be examined (Denzin & Lincoln, 2013).

Accordingly, within this exploratory case study, my experiences as both a school and system leader with years of experience teaching in regional, rural and remote schools have helped develop an understanding of the nature of school improvement, as well as the contextual factors that influence regional, rural and remote schools. Additionally, the time I have spent as a researcher gives a richness to a process of research and the discussions around school improvement, pedagogy and school leadership processes, although this equally introduces important ethical considerations that will be considered later in the chapter. This research study used the exploratory case study to describe with vividness and detail educational change within school communities; that is, to build upon theory, as well as develop and apply tangible interventions to situations. Furthermore, the case study adopted an exploratory approach since the school improvement processes for each school site are unknown.

In the case of school improvement in regional, rural and remote schools, this means determining the processes that influence practices, behaviours or understandings (Lynam & Cowley, 2007) to effect change. The qualitative researcher uses techniques such as interviews to create themes and build towards theory (Merriam & Tisdell, 2015). Creswell (2015) highlights the value of qualitative researchers using interviews so that "the participants can best voice their experiences unconstrained by any perspectives of the researcher or past research findings" (p. 216). According to Eisenhardt and Graebner (2007), theoretical sampling "means that cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs" (p.2 7). Thus, by the sampling and conducting of interviews from two hierarchical levels (system level and school leadership

level), the encounters of participants who created and experienced the school improvement in regional, rural and remote schools were captured from various standpoints. This sampling occurs to ensure the data collected from interviews highlights the social construction of reality that focuses on how the social experience is created through sensemaking (Gephart, 2004).

## 3.2 The Epistemological and Ontological Basis for Using Exploratory Case Study (ECS)

In this section, I delve into the core of my research methodology: the Exploratory Case Study (ECS). I will explore how ECS aligns with my epistemological and ontological stances and why it is a suitable choice for my study on school improvement in a regional, rural, and remote Diocese.

### *3.2.1 My Epistemological and Ontological Perspective*

Before I dive into the methodological specifics, it is important to consider the philosophical underpinnings guiding my research. Researchers are inherently situated within particular epistemological and ontological worldviews. In my case, my choice of ECS as a research methodology aligns with my epistemological and ontological beliefs. At its core, ECS mirrors my epistemological conviction that knowledge emerges not from predetermined or imposed perspectives, but rather through the careful exploration of real-world experiences and interactions within specific social contexts. ECS aligns with this perspective, allowing me to "discover theory by directly observing a social phenomenon in its natural form" (Yin, 2017). I acknowledge the complexity of social realities and their profound influence on my study's subject matter—school improvement processes.

To intentionally account for my positionality as both a system leader and a researcher within the Diocese under study, I embraced a reflective practice that foregrounded my dual roles and their potential influence on the research process. Recognising my insider status provided me with unique access and insights, but it also posed challenges related to bias and subjectivity. To mitigate these, I employed a research assistant for data collection, ensuring an additional layer of objectivity in gathering and interpreting data. This assistant, external to the diocesan community, approached the data with a fresh perspective, thereby complementing my deep, contextual understanding with an unbiased view.

Moreover, my active role in establishing and managing the Diocese's data ecosystem positioned me at the nexus of change and innovation within the educational landscape we explored. This unique vantage point was both a strength and a challenge. To transparently

navigate this, I included a rigorous triangulation of data sources—interviews, documentary evidence, and a reflective research journal—each serving as a counterbalance to my embedded knowledge and perspectives. My reflective journal, in particular, became a critical tool for self-examination, allowing me to critically interrogate my assumptions and the influence of my professional experiences on the research findings.

In synthesising these approaches, my aim was to enrich the research with my insights and experiences while rigorously ensuring that the conclusions drawn were robust, credible, and reflective of the participants' realities, rather than solely my own interpretations. This balance of insider knowledge with methodological safeguards was essential in crafting a nuanced, comprehensive understanding of school improvement within the diocesan context, marking a deliberate effort to harness my positionality constructively.

### *3.2.2 The Relevance of ECS to My Research*

This section delves into why I chose ECS as my research methodology because it stems from its seamless alignment with my epistemological and ontological foundations. ECS serves as my chosen methodology because it embodies an inductive approach, where theories naturally emerge from the data rather than being imposed from predefined perspectives (Creswell, 2015). My research goal is to construct a nuanced understanding of school improvement processes in rural, regional and remote schools, capturing the richness of these unique settings. ECS distinguishes itself by immersing researchers in the social world of participants, allowing me to capture their lived experiences, narratives, and interactions. Unlike methodologies that start with general principles and descend to specifics, ECS begins with specifics and ascends to theory development firmly rooted in the data (Stake, 2006). Creswell (2015) highlights the benefit of ECS, emphasising its capacity to "explore the phenomenon and then collect data to explain relationships in the data (p. 127)".

My research exists within the broader context of scholarship on rural education in Australia. While I acknowledge the extensive literature on this topic, I focus on a specific research gap—the experiences and processes of school and system leaders engaged in school improvement within rural, regional and remote schools. My intent is to contribute by providing a deep exploration within this particular area. Furthermore, ECS offers methodological flexibility, accommodating multiple variables for a comprehensive understanding of the phenomenon. As Yin (2017) suggests, the data-gathering phase in an exploratory case study is influenced by various factors, including the development of the

research protocol and case selection. ECS encourages a critical and reflective perspective, considering the broader social and political landscape that influences my case study.

ECS serves as my research methodology, aligned with my epistemological and ontological understandings. It facilitates theory development, methodological innovation, and a profound exploration of school improvement. ECS unlocks the intricate interactions of school and system leaders as I aim to expand and generalise theories (Yin, 2017). My research endeavours to make a meaningful contribution to the educational discourse informed by the unique perspective that ECS provides. As my journey unfolds, I will continue to navigate the complexities of rural, regional and remote education and shed light on the dynamics of school improvement within these unique settings. As I reflect on the path ahead, it is essential to emphasise the significance of ECS as a research methodology. It empowers me to immerse myself in the real-world experiences of my participants, gaining insights that extend beyond mere theoretical frameworks. As O'Donoghue (2006) notes, ECS allows me to investigate the underlying human elements that involve assumptions in everyday activity, freedom, meaning, interaction, and negotiation.

ECS is also not a static approach; it accommodates the dynamic nature of my research subject—school improvement in rural, regional and remote schools. In the field of education, this effect is a sensitive topic, due to the ongoing debate surrounding excellence and equity in education. As noted by Streb, Voelpel, and Leibold (2009), there is a need for "a specific research approach that would allow the researcher to actually enter the world of the object or individuals under study" (p. 78). My choice of ECS aligns with this need, as it enables me to enter the world of school and system leaders to understand the challenges and opportunities they face. It empowers me to examine the complex processes of adaptation, mediation, and resistance that are inherent in school improvement efforts, as described by Bowe, Ball, and Gold (2017).

Furthermore, ECS resonates with the idea of "theory building" in the context of my research. As part of the findings from my study, I intend to use an analytic generalisation approach, as Yin (2017) advocates, an approach that involves comparing empirical results to "expand and generalise theories and not to enumerate frequencies (statistical generalisation) (p. 38)". My research aims to focus on identifying and analysing the evidence and processes that underlie school improvement. In doing so, I seek to extract patterns in evidence and processes related to school improvement in these unique settings. I am interested in studying the participants to investigate the patterns of essential beliefs, values, and assumptions that guide decision-making, without envisioning influence over events and behaviours. As Stake

(1995) notes, “a case study is both the process of learning about the case and the product of our learning” (p. 28). In my case, the focus is on developing and testing a theory, with ECS serving as my guiding framework. I recognise that ECS requires a meticulous blueprint for its implementation, as emphasised by Yin (2017). This blueprint shapes my exploration of how school leaders and system leaders interact and share insights during the implementation of school improvement strategies and processes.

My research methodology revolves around the idea of ECS as a tool for generating theory from the specifics of my cases. I embrace the inductive nature of ECS, where theory emerges organically from my immersion in the data, rather than being imposed from external perspectives. In this context, I draw parallels with the Grounded Theory approach, where researchers begin without pre-stated theoretical lenses, “bracket out” presumptions, and build theory based on experiential data. Grounded Theory embodies an inductive approach, moving from specifics to generalisations, which aligns with my approach in ECS. While I recognise the existing literature on rural education in Australia, my research distinguishes itself by honing in on specific experiences and practices within rural, regional and remote schools. I intend to situate my work more prominently in relation to this literature, acknowledging the broader context while emphasising my unique focus.

In terms of the implications of my choice of ECS, I acknowledge the potential for methodological innovation in rural, regional and remote research. My approach, including the use of multiple case studies, allows me to evaluate the evidence and processes that have occurred within these contexts. I envision ECS as a means of not only exploring my research questions but also contributing to future studies. It offers a valuable methodology for unpacking the basic assumptions that underlie decision-making processes in rural, regional and remote schools.

### 3.3 Research Instruments

In the context of qualitative and exploratory case study research in education, the selection of appropriate research methods and instruments is paramount. Fujimura (1987) argues that case study research “achieves alignment by articulating-considering, collecting, coordinating and integrating-tasks between these levels of work processes” (p. 258). To gain a more comprehensive picture of the case, I have chosen to use a variety of research methods, including semi-structured interviews, document analysis and my own reflective research journal. As Elatia, Ipperciel, and Zaïane (2016) explain, the process is strengthened by “the

"how" and "why" of a study as this type of inquiry gathers information directly from participants about their interactions or experiences with the intervention" (p. 71).

Whilst conducting this research into school improvement in regional, rural and remote schools, the semi-structured interview was adopted as a method. The advantages of the semi-structured interview are that it enables reciprocity between the researcher and the participant and allows for the exploration of the issues in unexpected ways. Drawing on the work of Guba and Lincoln (1994), Kallio, Pietilä, Johnson, and Kangasniemi (2016) argue that "developing the semi-structured interview rigorously contributes to the trustworthiness of the semi-structured interview as a qualitative research method" (p. 2,963). Thus, the semi-structured interview observes a focussed structure for the interview and yet has the added freedom to build on insights, share information and deepen understandings. The purpose is to collect similar types of information from each participant by the provision of guiding dialogue from the researcher.

Following the discussion of the methodological approach that has been identified in the study, with reference to its ontological and epistemological framework and the justification for this approach in relation to understanding school improvement in regional, rural and remote schools, the next sections will outline the research procedures including participant selection, data generation and analysis methods, establishing quality and rigour and the outlining of the ethics procedures.

## 3.4 Data Generation and Analysis

### *3.4.1 Data Generation*

As I embarked on the practical phase of the case study, I initiated the data generation process, taking an active role as a researcher. The benefits of the exploratory case study are the iterative process, innate flexibility and the ability to test the conceptual framework. For the research to be aligned with qualitative research, research methods such as interviewing, and documentary analysis were employed in an interpretive design.

In order to build the credibility of the data, researchers such as Yin (2017) advocate for use of multiple data sources, and Patton (2005) recognises the use of written materials and documents data capture in a way that records and preserves context. O'Leary (2004) provides three primary types of documents as examples that are useful to the qualitative researcher: public records (mission statements, strategic plans, policy manuals), personal documents (emails, reflections, calendars) and physical evidence (professional learning materials, posters). Bowen (2009) notes that document analysis is a social research method and an

invaluable part of qualitative research. It is essential to triangulate between different data sources (e.g., interviews and documents) to support the credibility of findings and to contextualise the field of research.

### *3.4.2 The Selection of Participants*

This research study commenced in 2019 after a conversation with the diocesan Executive Director, who suggested that school improvement in rural, regional and remote schools was a fruitful source of research. In discussions with my doctoral supervisor, I decided to investigate school improvement and identify the processes that were taking place in regional, rural and remote schools. In the selection of the participants for the semi-structured interview, I approached several people through diocesan networks at professional learning opportunities.

The purpose of this research meant that the participants were selected because they were school and system leaders, and thus had a clear understanding of the processes that had been implemented as a part of a wider diocesan strategy. In selecting the schools, a meeting was first held with the Director to determine suitable sites. In accessing the diocesan data ecosystem, a diocesan longitudinal student data collection system, I identified school and system leaders who had contributed to enhanced learning, teaching and wellbeing outcomes based on student academic outcomes and on an internal range of assessment tools (Concepts about Print, Sound and Letter knowledge, Benchmarking, and Writing analysis), NAPLAN scores, English as an Additional Language population (EAL/D) and Socio-Economic Score Index (SESI). Thus, the school and system leaders were selected as a part of purposive sampling on both academic performance and context that was related to the research problem and research questions. In addition, these schools had been participating in the diocesan strategy initiative to target funding, personnel support and extra strategic resourcing. The school and system leaders that I selected had vast experiences in leading learning and teaching in primary and secondary school contexts within regional, rural and remote schools.

In using the exploratory case study to evaluate school improvements in regional, rural and remote schools, key members of the diocesan leadership team responsible for system leadership within the organisation were identified. In the first group, key members of the system leadership were chosen who were responsible for the direction and focus of the second group, which comprised school leadership teams. Memberships were clearly delineated by the roles and responsibilities of each group. Thus, a bounded system for the

case was created that could identify the stories and encounters of system leaders and school leadership teams, with this being used as the basis for exploring how these groups work together to construct meaning in school improvement in these diocesan schools.

In the next step, an interview guide was devised, using the research questions as the foundation. In effect, these were questions to interview the participants and to explore, specifically, their beliefs, thoughts, processes and actions about school improvement; the evidence used to evaluate their involvement; what participants had learnt during their engagement with regional, rural and remote schools; and how these relationships were constructed during the change process. This case study evaluated participant response outcomes in school improvement, focusing on their perspectives within rural, regional, and remote school contexts. These interviews were designed to capture the strategic choices, the balancing of conflicting factors, the trade-offs, and the relationships in school improvement (Mullings, 1999). This specificity is crucial for theorising school leadership and system change within the unique educational contexts, considering that much of the existing research has centred on metropolitan settings.

The essential elements of the interview process are *interaction* and *relationships*, with the research being as much a product of this social dynamic as it is a product of accurate accounts and replies (Denzin & Lincoln, 2018). Polkinghorne (2005) illustrates the use of the interview process as an iterative one, "moving from collection of data to analysis and back until the description is comprehensive" (p. 140). This is a form of data saturation whereby the collection of data continues until the new sources repeat what has been previously learned and further interview(ee)s no longer deepen and challenge the findings. In conducting the interviews, participants were encouraged to talk in narrative and metaphors to capture the richness of their experiences. Ricoeur (1991) contends that this approach of examining language gives meaning to the world of experiences and assists participants to be critical and creative in the "disclosure of possibility" (p. 490). This *disclosure of possibility* not only enlarges the meanings of our worlds but also sheds light on how educational leaders interpret, enact, contest, or disregard more general discourses and slogans, such as 'Non-Negotiables' or 'the Literacy Block'. This examination adds cultural and emotional perspectives to such policy statements, elucidating the methods employed by these school and system leaders to assess the accuracy and relevance of the data.

### *3.4.3 Conducting Interviews*

Interviews were conducted with participants who were either part of school leadership teams and system leaders between September 2020 and December 2020. Amongst the participants were six system level leaders, holding positions such as an Executive Director, Deputy Executive Director, and System Leaders, while the remaining six participants comprised school level leadership team members, including Principals and a Leader of Pedagogy.

Due to my existing relationships with the school and system leaders, I decided to mitigate any conflict of interest of unequal power relationships by employing a research assistant to conduct the interviews. Kesselheim and Maisel (20102) defined conflict of interest (COI) as "a set of circumstances that creates a risk that professional judgement or actions regarding a primary interest will be unduly influenced by a secondary interest" (p. 32). The decision to employ a research assistant was so decisions and practice patterns cannot be influenced by the working relationships that had already been established through my role as an active school and system leader in the same schooling system. The research assistant was well-credentialed and understood both the school and university sectors. As a mentor and my former principal and lecturer, he has had over 50 years of experience in Catholic education, a PhD and extensive research experience.

The audio-visual interviews were conducted and recorded using Zoom, with each lasting approximately 40 minutes. To further mitigate potential conflicts of interest, I received de-identified transcripts of the interviews from the research assistant, which ensured I was unaware of individual respondents. In evaluating the usefulness of the questions for the interviews, Flick (2014) and his evaluation was an initial source of guidance for designing the questions by keeping in mind the link between "the research questions and the theoretical relevance; the reasons for asking the questions; the formulation of the questions; and the structure of the question within the interview" (p. 105). Following on from Bogner, Littig, and Menz (2009), I then adopted a stance that developed the expert interview as a source of both technical and interpretive knowledge, which can offer rich insights from the participants' sphere of activity. Bogner and colleagues (ibid., 2009) state that expert interviews have three main functions:

(1) for exploration, for orientation in a new field to give the field of study a thematic structure and to generate hypotheses;
(2) The systematising expert interview can be used to collect context information complementing insights coming from applying other methods; and

(3) Theory-generating expert interviews aim at developing a typology or a theory about an issue from reconstructing the knowledge of various experts—for example, about contents and gaps in the knowledge of people working in certain institutions concerning the needs of a specific target group. (pp. 36-38).

This definition of expert interviews is used for members of a specific function and a specific professional experience and knowledge of the area. In this case, the expert interviews represent the participants charged with school improvement in regional, rural and remote schools. Table 3.2 represents the participants' roles at the time of the interview.

**Table 3.2:** *Participants' Roles at the Time of Interview*

| **Participant #** | **Role** | **Participant #** | **Role** |
|---|---|---|---|
| 1 | Executive Director | 7 | Principal |
| 2 | Deputy Executive Director | 8 | Principal |
| 3 | System Leader | 9 | Principal |
| 4 | School Performance Leader | 10 | Principal |
| 5 | School Performance Leader | 11 | Principal |
| 6 | Manager | 12 | Leader of Pedagogy |

Notes: n=12; females = 7, males = 5.

### *3.4.4 Follow Up Interviews*

Another data source that was used in this study was the use of follow-up interviews. The follow-up interview is a way of collecting more data by engaging participants a second time to further the discussion on a specific topic or a set of issues (see Silverman, 2016). Yin (2015) states that the advantage of using the follow-up interviews is that providing feedback is a means of letting participants know something about the uses to which their contributions were being used. The follow-up interview allows the researcher with time to examine the initial research to examine problem solving exercises, both from a deeper personal and

organisational perspective. Due to the follow-up targeting a precise issue, these interviews often yield insights that were missed in the first round of interviews with individuals.

The follow-up interviews consisted of one-on-one sessions with the participants, conducted as open-ended discussions led by the research assistant. The process involved my thorough review of the initial interview data, after which I constructed the follow-up questions for my research assistant to ask during these sessions, recognising the need for further exploration and deeper questioning around the area of school improvement processes. Basch (1987) evaluated the work of the researcher or moderator and found it essential in "creating a non-threatening and supportive environment that encourages all participants to share their views" (p.415). Notably, whilst having prepared questions is an important foundation, the moderator is also responsible for relying on judgement to pursue other lines of questioning that will provide more insight on a topic (Yin, 2017). In addition, the interaction between participants is of benefit to the researcher and is one of the strengths of the format (Silverman, 2016).

Follow-up interviews are noted for being data rich, inexpensive and for the economy of time in collecting this data (Schofield, 2002). Thus, the value in follow-up interviews is collaborative and requires the participants to be engaged and encouraged and build on each other's responses to provide a more detailed and rich in their responses (Casey & Krueger, 1994). At the same time, the moderator needs to have accomplished interviewing skills as to successfully elicit in-depth responses (Yin, 2015). As a neophyte researcher, I found it essential to prepare thoroughly for the semi-structured interviews, and I was indebted to the research assistant, who, being familiar with the format, guided the discussions effectively with wisdom, humility and humour. When the research assistant conducted the follow-up interviews, the sessions lasted for 45 minutes. These interviews involved four system leaders and three school leaders who provided valuable insights into the in-depth processes.

### *3.4.5 Documentary Evidence*

Policy documents were analysed as a data source to supplement the interviews and investigate the greater depth of language around school improvement in regional, rural and remote schools. The collection of relevant documentary evidence includes public and private records to provide valuable information in understanding the phenomenon (Merriam & Tisdell, 2015). Yin (2017) outlines examples of documentary evidence: from private documents, such as emails and jottings of individuals, through to public documents, such as meetings of minutes or presentations. Part of the responsibility of the team charged with

school improvement is to publish documents on the *My Apps Dashboard*, the internal portal for all diocesan employees. Within this documentation was evidence provided in the way of "Strategic plan 2017-2020" (Catholic Education, 2017). This document addresses the purpose, background, goals and objectives, key considerations, framework for catering for rural, regional and remote schools, how the learning agenda is supported by the framework, and the risk and benefits associated with this project. In other important documents – *Further Developing the Catholic Professional Learning Community Vision 2018- 2019, Faith Formation, Learning and Teaching in a Catholic Professional Learning Community 2015-2017* and *Living Well Learning Well- A Student Support Framework* – there is evidence that school improvement in regional, rural and remote schools is considered as a life cycle: a form of continuous improvement that was linked with the National School Improvement Tool. These cycles are created using basic project management methodology that had been adapted after an extensive literature review.

Furthermore, the school and system-level elements that were implemented from 2016-2018 were further categorised as: knowing the current state (*planning*); deciding the desired improvement strategies (*deciding*); planning the improvement strategies (*strategising*); implementing the change (*acting*); analysing the evidence (*analysing*); knowing the current state (*reflecting*). In addition, I was granted permission from the Diocese to access the numerous documents on the My Apps Dashboard, as well as the internal portals of the schools that were related to school improvement. These are outlined in Table 3.3.

**Table 3.3:** *Document Analysis*

| Document Type | System-Level (S) or School-Level (SL) | Number Collected |
|---|---|---|
| Current School Strategic Plan | SL | 5 |
| Previous School Strategic Plan | SL | 10 |
| School Annual Operational Plans | SL | 10 |
| School Annual Report | SL | 10 |
| Data Ecosystem pages | SL | 110 |

| Document Type | System-Level (S) or School-Level (SL) | Number Collected |
|---|---|---|
| Whole School Curriculum Framework | SL | 5 |
| Assessment Schedules and Semester Planners | SL | 20 |
| Whole-School Pedagogical Framework | SL | 5 |
| School Programs for Key Learning Areas | SL | 10 |
| Roles and Responsibilities of School Leaders | SL | 5 |
| Data Plan | SL | 8 |
| E-bulletins and newsletters | SL and S | 60 |
| Project Plans | S | 10 |
| Leadership Team Minutes | S | 20 |
| Presentations | S | 20 |

In their relationship with the wider diocesan organisational structure, the My Apps Dashboard exists as a portal for information about diverse topics, such as enterprise, policy and governance, business information systems, and information about school finances. As a result of the size and volume of the My Apps as a clearinghouse for system information, I decided to limit my search to the themes that were covered in the interviews. Subsequently, the documentary evidence (*n=300*) that I collected and analysed in this phase was used to explore the language of how school improvement was enacted in rural, regional and remote schools. Due to the nature of the research questions, I focused primarily on the evidence and processes that participants had enacted, and which had been centrally related to school improvement projects. Once this was established, the list of documentary evidence was further narrowed to those documents deemed most relevant to school improvement and my research, including project plans, annual improvement plans, communication plans, minutes,

presentations and analyses. This iterative selection process was used to sharpen the focus on the documentary evidence that could elucidate knowledge in the process areas within school improvement (*n=100*).

### *3.4.6 Reflective Research Journal*

Parallel with these data sources, I also produced a reflective research journal, which provided both a useful tool in learning and, importantly, my initial efforts to answer the research questions. This reflective research journal was started on the advice of my supervisor and was first used to record notes from supervisor meetings, but it soon expanded to include generative ideas about the research project. In conducting the interviews, the reflective research journal determined that fieldnotes are critical to ensuring that interviews were bracketing bias. One important function of the reflective research journal was the way that, after Creswell (2015) they helped "to funnel from broad observations to narrow ones" (p. 228). In following Creswell, the reflective research journal provided the time and space to write follow up notes after my research assistant conducted the eleven interviews, and I was consequently able to record aspects of the interviews evaluating not only my participants' responses, but also the conduct of the research assistant using the checklist for interviewing advocated by Creswell (2015). This reflective research journal was a constant companion during the research process and included writings on all the topics that arose from the interviews.

For example, after conducting the interviews, I reflected on the interview process by answering questions using a checklist about what I had learnt and what further things I wanted to know. Ultimately, the benefits of using checklists as a form of self-reflection helped to improve the quality of the interviews as a form of qualitative research (Tong, Sainsbury, & Craig, 2007).

### *3.4.7 Data Analysis*

Arguably, through the researcher engaging in an iterative and complex process, the data analysis of qualitative research produces believable and trustworthy findings. Merriam and Tisdell (2015) highlight that rigour in qualitative research stems from "the researcher's presence, the nature of interaction between the researcher and participant, the triangulation of data, the interpretation of perceptions and rich, thick descriptions" (p. 165). Thus, the goal of data analysis is making meaning out of the data by interpreting what people have said and what the researcher has seen and read.

To this end, Creswell (2015) highlights the effectiveness of using six steps that are commonly used in data analysis to ensure that the data is interpreted to "make a personal assessment as to a description that fits the situation or themes that capture major categories of information" (p. 237). First, the data was collected by the researcher and the research assistant in the form of interviews, documentary evidence and a reflective research journal, which produced an initial body of evidence. Second, data were prepared by transcribing field notes, with a professional transcriber used to expedite the process. In the next step, I read closely through the data to obtain a general sense of the material. The coding stage of this process involved the location of the text segments, and a code was assigned to them. The final stage of the coding process was two-fold: one coding the text for description and one coding of the themes to be used in the research reports.

As the research progressed, another useful source of information about coding was the perspective of Saldana (2009). Saldana (2009) posits that coding in qualitative inquiry requires "meticulous attention to language and deep reflection on the emergent patterns and meanings of human experience" (p. 21). Thus, Azure Cognitive Services and Power BI software were utilised to explore and identify patterns of data analysis, encompassing both *in vivo* (concepts derived directly from the participants' own words) and *a priori* (concepts established prior to data generation) concepts across the twelve interviews and the documentary evidence (see Appendix B). Adopting this approach, the initial coding template is presented in Table 3.4 below. In the provided coding template (Table 3.4), a hierarchical structure is employed to categorise and organise the codes. The coding process involves multiple levels of nodes to capture different aspects of the data. At the Primary Node, the overarching category is 'Process (PDCA Cycle),' which encompasses discussions related to processes contributing to school improvement in regional, rural, and remote schools. Moving to Secondary Nodes, I delved deeper into specific aspects, such as 'Plan, Do, Study, Act,' which represents the key phases of the PDCA cycle. Finally, at Tertiary Node, I further refined the coding to identify where these processes exist, whether at the macro (system level), meso (school level), or micro level (classroom level). This hierarchical structure allows for a more nuanced understanding of the data, capturing both the broader themes and the finer details. It facilitates the organisation of information related to processes, tools, techniques, and contextual factors, making the analysis more comprehensive and insightful. The themes that emerge mention the processes that contribute to school improvement in regional, rural and remote schools that are linked to the evaluation of processes, as well as the tools and techniques that are used when implementing these processes.

**Table 3.4***: Excerpt from Coding Template*

| Primary Node | Secondary Node | Tertiary Node | Definition | Linked to … (codes/concept) | Source of code |
|---|---|---|---|---|---|
| Process (PDCA Cycle) | | | Mention of the processes that contribute to school improvement in regional, rural and remote schools | Plan, Do, Study, Act | Interview and Document |
| | Macro (system level)/Meso (School level)/Miso Level (classroom level) | | Tools and techniques (inputs/outputs/evidence of impact) | Identification of the level that the process exist | Interview and Document |
| | | School or system leader; Geolocation; documentary or interview data | Contextual information about the data | | Interview and Document |

In this type of coding template, many codes have been identified. These codes are described as a segment of text pertaining to different topics, such as the processes, activities and strategies of implementing change. Furthermore, useful information has been drawn out about the settings and context; the participants' way of thinking about other people and objects; and the perspectives held by participants. Thus, school improvement in regional, rural and remote schools becomes the broad category, and it then becomes funnelled into both descriptions and themes that were, at times, commonplace and, at other times, quite unexpected. In using case studies as a form of qualitative research, such approaches to data analysis are both descriptive and thematic (Creswell, 2015). Accordingly, I meticulously analysed the data, employing a systematic process to distil the texts into five to seven themes.

This involved a step-by-step approach, progressively moving from a comprehensive examination of the data to the identification and refinement of these key thematic elements.

After being layered and interconnected, these patterns were visualised in a thematic map of school improvement in regional, rural and remote schools; this is presented in Figure 3.1 below. Figure 3.1, entitled 'Thematic Map of School Improvement in a Regional, Rural, and Remote Context', is a visualisation created through my own analytical process. This thematic map was developed using Power BI to synthesise and represent the key themes identified from the qualitative data collected during my research. This systematic analysis aimed to distil the complexities of school improvement within regional, rural, and remote contexts into discernible themes, enabling a deeper understanding of the processes, tools, and techniques employed.

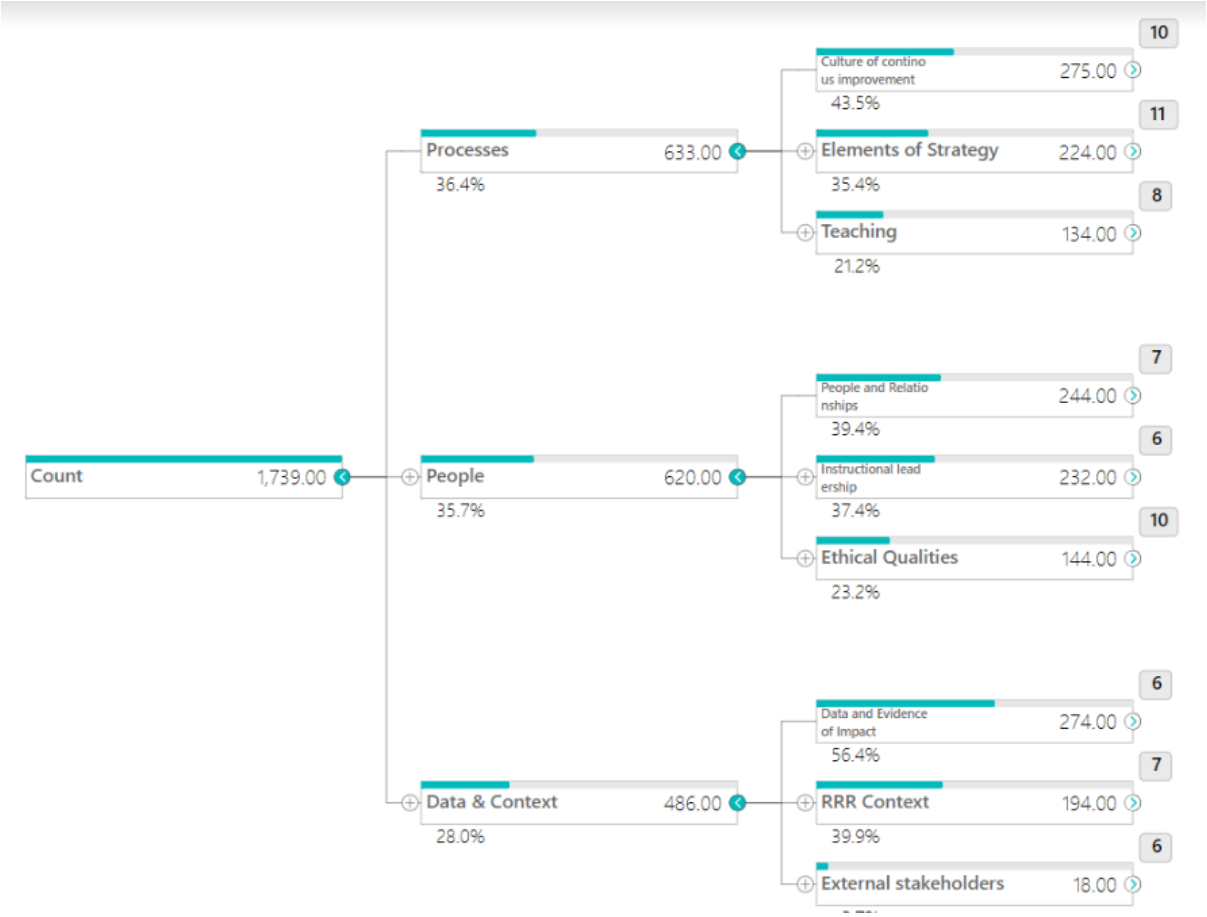



**Figure 3.1**: *Thematic Map of School Improvement in a Regional, Rural and Remote Context*

Once the thematic map was devised, a more detailed analysis could occur, whereby the various themes (e.g., *processes*, *tools*, *techniques*…) could be further explored. Vaismoradi,

Turunen and Bondas (2013) argue that this rigour in thematic analysis helps build rich descriptions, which enable "the researcher to combine analysis of their meaning within their particular context" (p. 403). In effect, this ongoing analysis refines the themes by comparing and contrasting, finding patterns, and contributing to the overall story by developing precise definitions for each theme (Merriam & Tisdell, 2015).

In refining the thematic analysis, the recursive element of habitually exploring the research questions was paramount. By trying to deepen the understanding of the research questions and the nature of school improvement in regional, rural and remote schools, there were several different coding themes and categories that were selected. In the final step, the documentary evidence was analysed to search for a more detailed and nuanced context of the data.

### *3.4.8 Explaining the Data Analysis Process*

In the context of this case study about school improvement, the collaboration between school leaders and system leaders was crucial for bringing about positive change. Within this study, this collaboration was even more critical due to the unique challenges faced by schools in rural, regional, and remote communities. The data highlight how this collaboration was a complex network of relationships and interactions between various stakeholders, with school and system leaders at the forefront of the Strategy. To understand the breadth and depth of this collaboration, the term "ecosystem" is applied, as it best identifies the array of essential interconnections that manifested this particular Strategy.

The concept of a school improvement ecosystem is proposed to show that the Strategy is more complex than initially envisaged. The school improvement ecosystem is a representation of the interplay between data, people, and processes. The school improvement ecosystem helps ensure the schools collect and analyse the appropriate and necessary data to inform decision-making. People are essential to the data ecosystem as they provide the skills and knowledge to analyse the data. Processes are critical to ensure data is collected and analysed consistently and accurately. Finally, data serves as a catalyst to automate and guide processes by providing actionable insights that drive meaningful impact.

Hence, this concept of the school improvement ecosystem will be illustrated and described more fully in this chapter. This task was made possible through the use of Microsoft Power BI to visualise data analysis techniques via sentiment analysis, network data analysis and data text mining. It should be noted that careful data cleaning and pre-processing techniques were necessary to ensure the accuracy and validity of the results. The researcher

employed the company Lime Theory (Perth, Western Australia) to perform the extraction, transforming and loading (ETL) techniques for this work. The next section illustrates and describes these three techniques used to analyse these data.

### *3.4.9 Network Data Analysis*

Using Microsoft Power BI, network data analysis involves the study of relationships and connections between different stakeholders in a system. In the school improvement ecosystem, the researcher used network data analysis to analyse the relationships between school and system leaders and identify areas of collaboration and cooperation. Essentially, network data analysis involves mapping the connections between the school and system leaders, thereby making it possible to identify key players and the flow of school improvement information within the Diocese. For example, one particular line of inquiry involved analysing the relationships between instructional leadership teams, professional learning teams, and literacy blocks. One specific learning in this context involved analysing the school improvement ecosystem in a rural town with many Indigenous students. By mapping out the relationships between stakeholders in the ecosystem, the researcher identified areas where there were phases in the Strategy that determined key system actions and interventions, such as resourcing the literacy block, providing $1 million worth of quality literature, and employing additional teachers and leaders. This analysis revealed a strong relationship between schools and the system and that system-led initiatives addressed barriers to professional learning around teaching.

Through the network data analysis, the research identified that a key to the success of the Strategy was the development of targeted interventions that addressed complex disadvantages and improved overall student outcomes. I used this network data analysis information to determine the theoretical underpinnings of this particular school improvement ecosystem and to identify the strengths and limitations of the Strategy for this rural, regional and remote Diocese. The school improvement ecosystem was particularly complex and challenging to navigate in a rural, regional, and remote context. The complexity of the Diocese can be described by factors including geolocation and area-specific disadvantage, limited resources and infrastructure, and unique cultural and socioeconomic factors. Together, these characteristics impacted student outcomes.

Figure 3.2, entitled ‘Network Analysis Map’, is an analytical creation of my own that is designed to visually represent the complex interconnections and frequencies of statements related to the Plan-Do-Check-Act (PDCA) cycle made by school and system leaders during

interviews. This network data analysis map was developed using Microsoft Power BI, highlighting the emphasis placed on different phases of the PDCA cycle in the context of school improvement strategies in regional, rural, and remote schools. Figure 3.2 below presents a network data analysis map, and a detailed description is then provided. The main graph in the visualisation is a network map: the grey nodes represent the frequency of statements made by school and system leaders during interviews. These statements are connected to the concept of the Plan-Do-Check-Act (PDCA) cycle described below. The network map helps users explore the relationships and connections between these statements, allowing for a deeper understanding of the school improvement ecosystem.

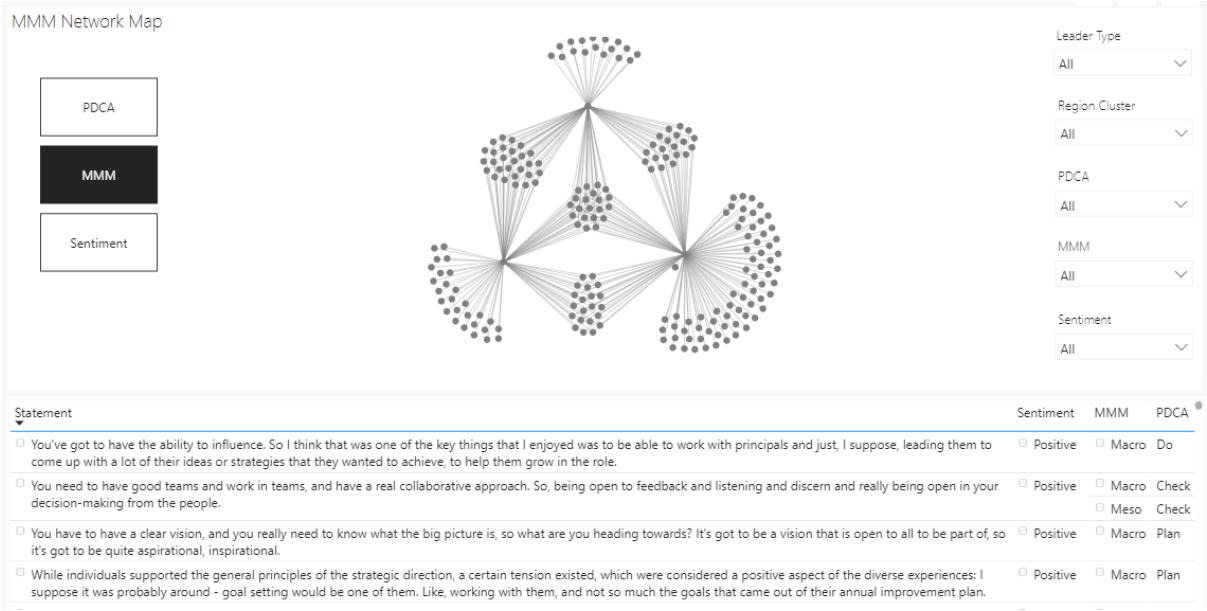



**Figure 3.2:** *Network Analysis Map*

One of the main insights from the network map is the clear visualisation of the relationships (i.e., the arcs) between the different phases of the PDCA cycle (i.e., the nodes). The ‘Plan’ phase is the most frequently mentioned, followed by the ‘Check’ phase as the second most frequently mentioned; the ‘Do’ phase is third, while the ‘Act’ phase is mentioned the least. This highlights the importance of planning and checking in the school improvement process, as well as how difficult it is for school and system leaders to have evidence of impact in their roles. The research signals that the area of evidence of impact may require more attention and support by understanding the key metrics that promote learning, teaching and wellbeing outcomes that support school improvement. Furthermore, the network map reveals that the school and system leaders who were most comfortable with the school improvement

processes had evidence of impact in their roles. This finding underscores the importance of having leaders who are well-versed in the PDCA cycle and who can effectively navigate the complex school improvement ecosystem.

Using Microsoft Power BI to undertake network data analysis was a valuable tool for understanding the unique challenges and opportunities within this rural, regional, and remote Diocese. Identifying school leaders and system leaders in the network data analysis uncovered that targeted interventions were essential for this school improvement Strategy. The next Microsoft Power BI component to be presented is that of sentiment analysis.

### *3.4.10 Sentiment Analysis*

The next step was to use Microsoft Power BI sentiment analysis process as a technique to determine the emotional tone of the interviews with school and system leaders, as well as in the publications that the Diocese produced. In the context of school improvement, I used this sentiment analysis technique to analyse the attitudes and emotions expressed by school and system leaders towards the Strategy. In utilising Microsoft Power BI sentiment analysis, I then used natural language processing (NLP) and machine learning algorithms to analyse the text data and determine the content's overall sentiment or emotional tone (Hansen & Borsch, 2022). Moreover, regarding the school improvement ecosystem, I used sentiment analysis to analyse interview data and publications about various aspects of the Diocese, such as the school improvement cycle, the culture of the Diocese, and the phases needed to scale the Strategy. By analysing the sentiment of their communications, it was possible to identify the areas of agreement and disagreement and the overall mood of the school and system leaders. In the dataset analysed, the overall mood of the school and system leaders was generally positive towards the Strategy.

By analysing the sentiment expressed in the interviews with school and system leaders, the researcher identified the critical areas of concern for the people, processes and data, which informed decisions to further conceptualise the key impressions of the school improvement ecosystem. Figure 3.3, entitled 'Sentiment Analysis', is another analytical creation derived from my application of Microsoft Power BI's sentiment analysis capabilities to explore the emotional tones and attitudes expressed in interviews with school and system leaders, as well as in diocesan publications regarding the school improvement Strategy. This figure visually synthesises the general sentiment towards the Strategy, highlighting areas of positive reception and potential concerns as expressed by these key stakeholders. The insights gained in this way are illustrated in Figure 3.3.

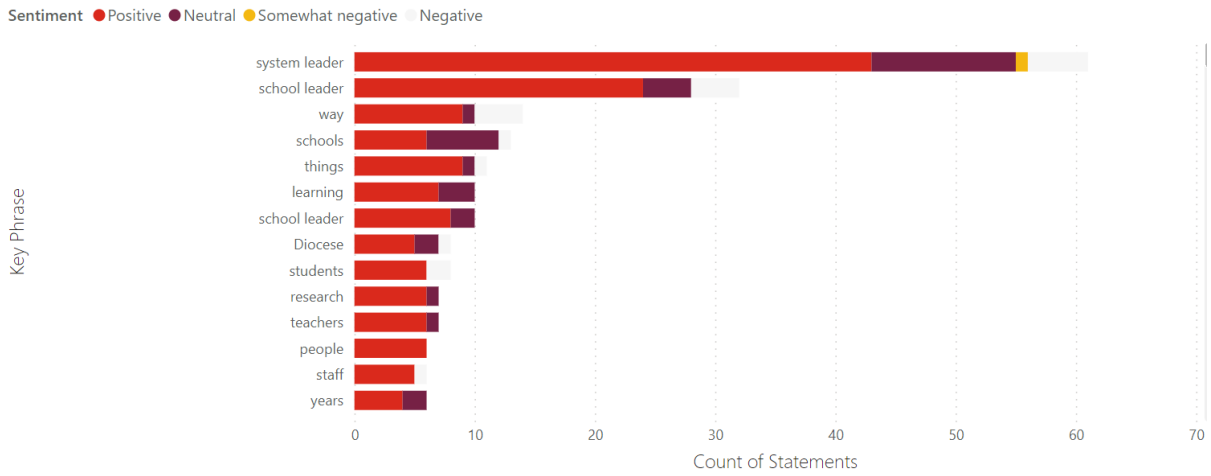



**Figure 3.3:** *Sentiment Analysis*

One benefit of using sentiment analysis in the context of this school improvement strategy was the analysis of school and system leaders' perceptions of various aspects of the Strategy, such as school improvement processes, the experiences of professional learning, and the changes brought about by the introduction of co-teaching. By analysing the sentiment expressed by school and system leaders, I gained insight into the specific areas where improvements in student learning outcomes occurred during the Strategy and the targeted actions that addressed the issues. To that end, relationships between the different stakeholders were repeatedly highlighted as being the most significant response in the interviews and the diocesan publications.

Similarly, I employed sentiment analysis to analyse the Director's communications on the quality of the school improvement across the Diocese, the effectiveness of the Strategy, and other essential aspects of the school and system relationship. The Director's communications sent out to the schools identified collaboration and the concept of strong teams, learning as an organisation, and evidence of impact as integral to the school improvement efforts in the Strategy. In addition to analysing the Directors' communications, I used sentiment analysis to monitor project plans for mentions of the Strategy and track system leaders' opinions on various issues related to the school improvement. Thus, this data analysis around the Strategy's key issues helped the researcher identify system leaders' perceptions about school improvements.

The conducting of sentiment analysis provided valuable data analysis for this particular case study involving school improvement in a regional, rural, and remote Diocese.

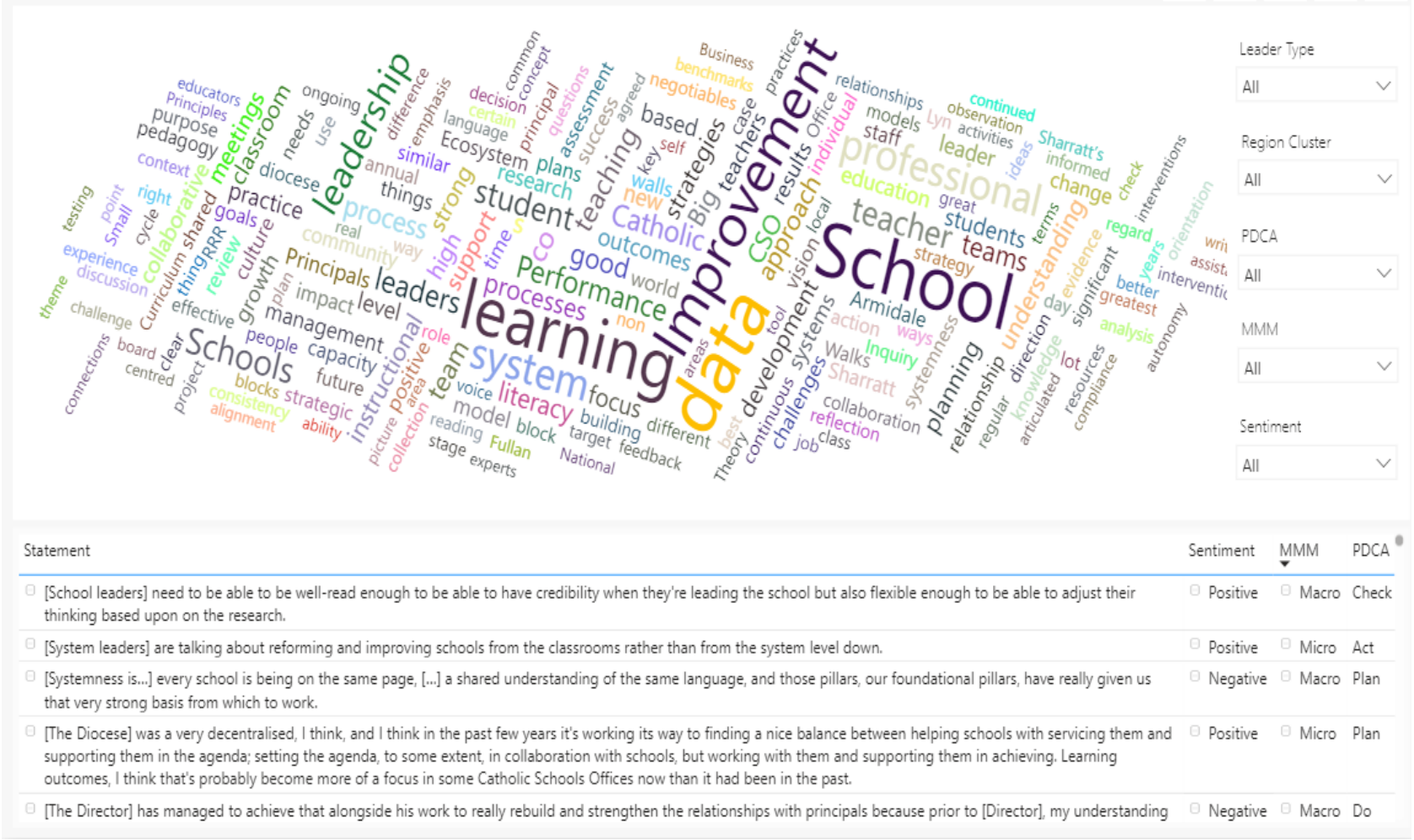
By analysing school and system leader interview data, monitoring system communication, and identifying areas of strength and weakness, I could identify themes to further build the conceptual framework of a school improvement ecosystem. The final Microsoft Power BI component to be presented is that of keyword extraction.

### *3.4.11 Keyword Extraction*

Keyword extraction is a technique used in data analysis that involves identifying and extracting important terms or phrases from a corpus of text data (Muhammed et al., 2022). Moreover, keyword extraction is a computer-aided process that can extract valuable insights from unstructured text data. However, as Alshareef, Majrashi, Helal, and Tahir (2021) point out, “the challenge has shifted to finding effective mechanisms to extract valuable knowledge from this data" (p. 483). In the context of this school improvement study, I used keyword extraction to analyse the content of communications between school and system leaders. By analysing the text of these communications, I could identify common themes, priorities and concerns to identify important terms and phrases related to school and system leaders’ perceptions that ultimately shone a light on how the Strategy was able to create evidence of impact. More specifically, I used Microsoft Power BI and Microsoft Azure Synapse and Cognitive Services to assist with keyword extraction. I also incorporated natural language processing (NLP) techniques, including tokenisation and part-of-speech tagging, to break down text data from school and system leader interviews and diocesan publications. Machine learning algorithms, such as topic modelling and clustering, are advantageous for identifying emerging themes, detecting patterns, and grouping similar terms together (Zhang et al., 2021).

Interestingly, the keyword extraction process highlighted the importance of relationships within the Diocese. Time and time again, people, relationships, students, teachers and school and system leaders were identified as central to the Strategy. The ‘Keyword Extraction Graph’ (Figure 3.4) and the subsequent ‘Keyword Extraction Canvas’ (Figure 3.5) are analytical creations developed through the application of Microsoft Power BI and Azure Synapse Cognitive Services. This approach enabled me to extract and visually present the key terms and themes from the interviews and diocesan publications, highlighting the focus areas within the school improvement ecosystem. These visualisations are not mere reproductions of collected data but are rather represent a synthesis of key insights derived from applying natural language processing (NLP) techniques and machine learning algorithms, showcasing my analytical interpretation of the underlying patterns and themes

that emerged from the data. The following Keyword Extraction Graph (Figure 3.4) illustrates the array of key words that were extracted from the data and then this is followed in Figure 3.5 by a visual presentation of the key terms mentioned by school and system leaders during interviews, as well as those found in document analysis. This graph aims to highlight the most frequently occurring words related to the school improvement ecosystem, providing a clear representation of the primary areas of focus and priorities.




| Statement | Sentiment | MMM | PDCA |
|---|---|---|---|
| [School leaders] need to be able to be well-read enough to be able to have credibility when they're leading the school but also flexible enough to be able to adjust their thinking based upon on the research. | Positive | Macro | Check |
| [System leaders] are talking about reforming and improving schools from the classrooms rather than from the system level down. | Positive | Micro | Act |
| [Systemness is...] every school is being on the same page, [...] a shared understanding of the same language, and those pillars, our foundational pillars, have really given us that very strong basis from which to work. | Negative | Macro | Plan |
| [The Diocese] was a very decentralised, I think, and I think in the past few years it's working its way to finding a nice balance between helping schools with servicing them and supporting them in the agenda; setting the agenda, to some extent, in collaboration with schools, but working with them and supporting them in achieving. Learning outcomes, I think that's probably become more of a focus in some Catholic Schools Offices now than it had been in the past. | Positive | Micro | Plan |
| [The Director] has managed to achieve that alongside his work to really rebuild and strengthen the relationships with principals because prior to [Director], my understanding | Negative | Macro | Do |

**Figure 3.4:** *Keyword Extraction Graph*

The Keyword Extraction Graph is generated based on the frequency of each term in the collected data, with the size of each word corresponding to the number of times it was mentioned. The graph features interactive toggles that allow users to filter the words displayed according to leadership roles and specific areas of the school improvement ecosystem. Additionally, beneath the Keyword Extraction Graph, each of the sentences containing the specifically mentioned word is displayed. This feature enables users to search for a specific word and view its application in context allowing for a deeper understanding of how the words are used in the interviews and document analysis. When a word is searched, the corresponding sentences are highlighted, making it easy to identify and analyse the relevant information. As shown in Figure 3.4, some of the most frequently mentioned terms in the word cloud include “school”, “improvement,” “learning,” “professional,” and “leadership”. These terms indicate the main areas of focus within the school improvement ecosystem and provide insights into the priorities of school and system leaders. The prominence of terms like “improvement” and “learning” suggests that human resources and a strong focus on learning are crucial factors in driving positive change within the Diocese’s school improvement efforts.

Furthermore, the Power BI canvas was used to complement the key word analysis initially produced via the Keyword Extraction graph (see Figure 3.5). The keyword extraction canvas, my own analytical creation, presents two interconnected graphs that provide a deeper analysis of the themes within the school improvement ecosystem: the Phrase graph and the Count by Key Theme graph. These graphs visualise the key phrases and themes mentioned by school and system leaders during interviews as well as those found in document analysis, highlighting the most frequently occurring terms and themes related to the school improvement ecosystem.

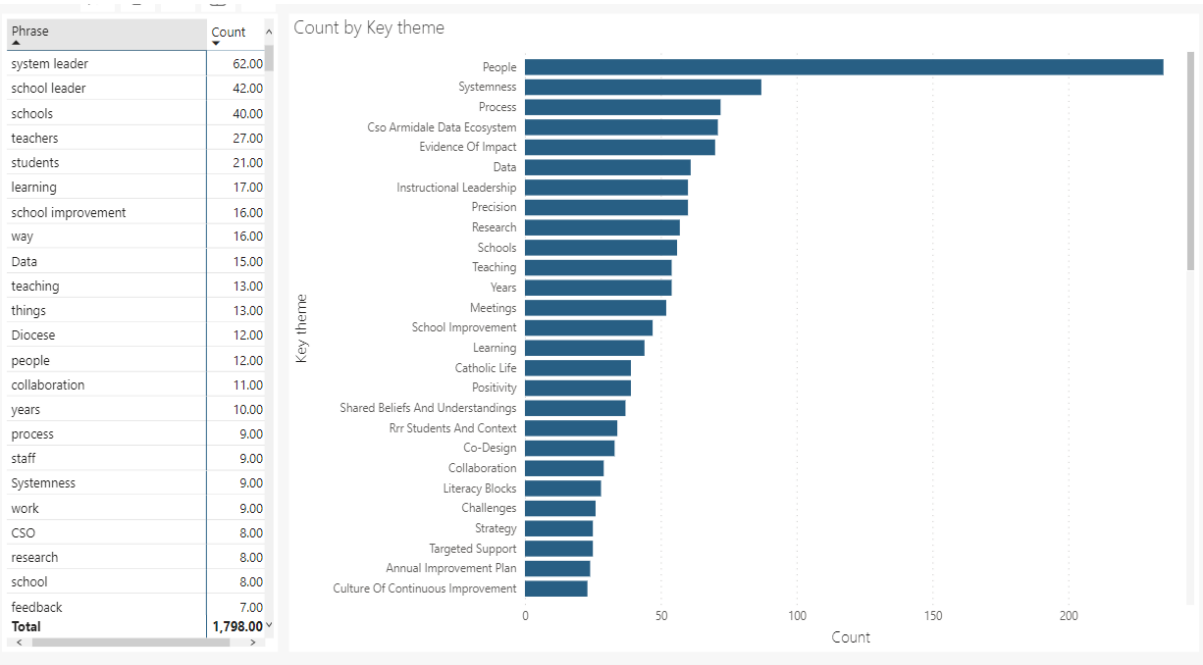



**Figure 3.5:** *Keyword Extraction Canvas*

The Key Phrase Count graph displays the frequency of key phrases, while the Theme Count graph aggregates these key phrases into overarching themes. In the Key Phrase Count graph, the horizontal blue bars represent the frequency of each key phrase, with the number count displayed on the left-hand side. The Theme Count graph presents a similar visualisation with horizontal bars representing the frequency of key themes. Users can toggle between leadership roles and areas of the school improvement ecosystem to filter the words and themes displayed on both graphs.

Some of the most frequently mentioned terms in the Key Phrase Count graph include different roles for people in the ecosystem, the processes that occurred, and the use of the data ecosystem. The Theme Count graph reveals that “people” stands out as the key theme, followed by “systemness,” “processes,” “CSO [Diocese] data ecosystem,” “evidence of impact,” “data,” “instructional leadership,” and “precision.” These terms and themes indicate the main areas of focus and priorities within the school improvement ecosystem.

Key insights from these graphs suggest that factors such as people, processes, and data play crucial roles in the Diocese’s school improvement efforts. The prominence of these terms and themes highlights the importance of human resources and a strong focus on learning in driving positive change in the regional, rural, and remote Diocese. Furthermore, the interrelationship between people, processes, and data will be examined in greater depth in subsequent sections of the study.

By analysing the resulting key terms and concepts, the researcher was able to gain insights into themes that were important in the unfolding of the Strategy. The resultant themes facilitated an informed and in-depth understanding of the themes that led to the building of the conceptualisation of a school improvement ecosystem described later in this chapter. Additionally, it was important for the researcher to consider the nuances and context of the data being analysed to avoid making false conclusions or inappropriate generalisations.

### *3.4.12 Summary*

To summarise this section, network data analysis, sentiment analysis and keyword extraction were valuable techniques used to analyse data gathered by the research processes. By using these techniques, it was possible to identify the perceptions of school and system leaders, understand the emotional tone of communications, and extract valuable insights from unstructured text data. Moreover, the researcher was able to identify themes that emerged from this rural, regional, and remote Diocese to effectively illustrate the boundaries of the Strategy in this particular case study. Network data analysis, sentiment analysis and keyword extraction were used to inform the development of the notion of a school improvement ecosystem which will be further discussed in the next chapter.

## 3.5 Quality

The establishment of careful inspection and forthright debate – with others and oneself – is key to the rigorous evaluation of research findings. Researchers rely on rigour to ensure trustworthiness, and that the careful documenting of processes can produce substantive and defensible findings. In comparison to trustworthiness, research can be considered accurate if it adheres to a set of standards that evaluates the methods for its reliability and validity (Yin, 2017). However, recognising the positivist leanings of Yin, researchers like Stake (1995), and Merriam and Tisdell (2015), suggest that qualitative research differs due to its *constructivist* ontology. In a similar vein, according to Guba and Lincoln (1994), qualitative studies have developed an analogous ‘trust-worthiness’ criteria set based on credibility, transferability, dependability and conformability. In thinking about my own experiences as a researcher, the interviews and documentary analysis stimulated a rich description of how and why school and system leaders brought about school improvement in regional, rural and remote schools. Thus, the primary focus of this research in establishing quality, rigour and validity is the transparency of the iterative processes used when analysing the data and (re)presenting the findings.

### *3.5.1 Credibility*

In establishing credibility, one must provide the reader of the research with clear and accurate descriptions that are ordered and recognisable. To achieve this, the researcher has to practise some type of reflexivity. Roos (2005) states that reflexivity and the researcher include dispositions and statements about their own assumptions and biases. In this exploratory case study, I practised reflexivity in three key ways: *i)* maintaining a reflective research journal (as mentioned above) to define and conceptualise ideas and understandings along the way; *ii)* using extensive field notes when documenting interviews; and *iii)* providing the reader(s) with descriptions of my own educational experiences of school improvement within regional, rural and remote schools.

The value of considering specific strategies – such as triangulation and member checking – to aid validity is an essential technique for the qualitative researcher interested in producing research that has credibility. In the first instance and aligning with the Yinian concept of construct validity, *triangulation* is the process of using multiple data sources (e.g., different interviews from individuals, the collection of documents or types of data, using different data generation methods) to provide additional validity by cross-referencing and confirming the insights obtained from different data sources (Yazan, 2015). This allows key findings to be confirmed while also, importantly, helping to identify moments of contradiction or disjuncture between sources (e.g., between respondents, or between interviewees and official documents). Another specific strategy is the use of *member checking*, whereby interview participants are consulted afterwards to analyse the accuracy of their recorded accounts. This member checking from participants, who read and reviewed the transcripts, ensured that their interpretations acted as an additional quality check for my own interpretations and understandings. Similarly, these compatible activities represented efforts to maintain fairness and realism, acknowledging the broader and more complete construction of the research data than possible by my own observations and accounts alone. Throughout this process, critical reflexivity to develop analysis was essential to aid rigour in this exploratory case study. In effect, this was generated through the detailed feedback my supervisors provided and played a critical role in providing guidance.

### *3.5.2 Transferability*

Another important concept that requires attention by qualitative researchers is *transferability*; that is, to make my interpretations accurate and useful beyond my own observations and context. The central position of transferability is the significance and detailed description of

both the context and the procedures to impress on the readers of the research that the research study can be applied and is relevant from one setting to another. Achieving transferability is largely through the provision of thick descriptions to "provid[e] rich accounts of details of a culture" (Geertz, 1973, p. 51). Thick description takes place in this study by presenting multiple perspectives of the school leaders and system leaders who are engaged in school improvement in disadvantaged schools. Likewise, Yin (2017) concurs with this purposeful selection of rich data, insofar as it aids interviews and observations that can help establish external validity. I explicitly sought to do this in Chapter 1 when outlining, specifically, the regional, rural and remote school, the roles of the system and school leaders and the processes that were implemented for school improvement. Together, examples of direct quotations that illuminates the research findings and the roles and processes employed for school improvement allow the reader to demonstrate transferability into another regional, rural and remote school. I should add that this does not imply my findings are directly relatable to *all* such regional, rural and remote schools, but that their respective contexts should be foregrounded when seeking to understand school improvement processes.

### *3.5.3 Dependability*

Another consideration, *dependability*, is to ensure that the research is detailed with care and precision so that a study may be repeated. As Creswell (2015) states, this can be achieved by using "overlapping methods and in-depth methodological descriptions of the procedures" (p. 258). Guba and Lincoln (1994) equally suggest the production of a decision trail (i.e., the researcher's thinking and decision-making processes) that is auditable and that documents the ideas, key decisions and processes is critical, so that another researcher can readily follow the steps and produce comparable findings. From a similar direction, Yin (2012) states that by using case study protocols, it allows the researcher to strengthen the validity and reliability of the case study and the data (and analyses) produced. In seeking to maximise dependability of, the study requires the accurate collation of the research processes undertaken, such as the data sources used by the researcher, the data analysis and coding processes employed, and the administrative strategies used to manage data collection (e.g., participant consent forms, interview transcripts) (see Gibson & Brown, 2009). Dependability in this study has been outlined in this chapter on methodology and research methods, as well as the entailing of the recorded field notes and analysis notes. In turn, this auditable document trail has established accountability in how the research findings are presented.

### *3.5.4 Confirmability*

Finally, the literature surrounding *confirmability* presents the checking and auditing among different data sources. According to Guba and Lincoln (1994), confirmability exists as a counterpoint to the qualitative counterpart to bias by recognising the interpretivist nature of the world and the inherent problems associated with any attempts at objectivity. For this reason, my exploratory case study used multiple methods of data generation in the form of interviews, documentary analysis and a reflective research journal to establish the confirmability, quality and rigour of the study. Hence, triangulation is the process of corroborating evidence from different individuals, types of data or methods of data generation to enhance the accuracy of the study (Merriam & Tisdell, 2015; Stake, 1995; Yin, 2017). The use of these strategies was outlined earlier in the chapter. Similarly, Miles, Huberman and Saldana (2013) state that a key aspect of confirmability is the researcher acknowledging *their own beliefs and assumptions* about the research experience. Notably, Morrow (2005) argues this concept of reflexivity enables "researchers to inform their audiences about their perspectives as well as to manage their subjectivity" (p. 250). Highlighting these beliefs and assumptions is integral to establishing that research findings are not solely attributed to the researcher or the participants. Instead, they are actively co-constructed through iterative processes of interpretation and reinterpretation, embodying the essence of constructivist inquiry. In turn, this creates a research study that is accurate and credible to allow for the integrity of the research results to be scrutinised, and to address the issues of ethics.

## 3.6 Ethics

This research project has been conducted with stringent ethical and moral conduct, and protecting the participants' wellbeing has been a primary consideration. At the cornerstone of this research, the key ethical universal guidelines were followed: the *Nuremberg Code* (National Institute of Health, 1949), the *Declaration of Helsinki* (World Medical Association, 2007) and the *Belmont Report* (US Department of Health Human Services, 1979). As outlined in Creswell (2015), the three basic principles enshrined in the Belmont Report, and which guide the ethical stance of the researcher, include "beneficence of treatment of participants, respect for participants, and justice" (p. 22). In this view, ethical conduct is viewed as an axiological relationship between the social researcher and their participants. Put another way, the values underpinning the ethical stance of the research process is crucial to any relationship between researcher and the participants.

This research project commenced when I was working as a Primary Leader of Learning at a Brisbane Catholic school in 2017; afterwards, I moved to a regional, rural and remote Diocese, which necessarily changed my research focus. Prior to the empirical phase, the research design was outlined so as to be bound by the National Health and Medical Research Council (NHMRC) Research Ethics framework. In addition, this exploratory case study has been approved by Australian Catholic University Human Research Ethics Committee (HREC) at the time of my confirmation into the Doctor of Education programme. In addition, the Diocese that is the focus of my research has its own research guidelines, and official approval was granted through the executive director as an important requirement to work with system leaders and school leadership teams.

### *3.6.1 Confidentiality*

According to the Australian Catholic University HREC, a key aspect of ethical conduct entails respecting the confidentiality and privacy of the participants. In treating the participants with ethical respect, participants were presented with information about the purpose of the research, the types of data that would be collected and how the data were to be used and reported (see Creswell, 2015; Merriam & Tisdell, 2015; Yin, 2017). Furthermore, the participants were assured of their voluntary involvement through an informed consent sheet and interview information form. Moreover, participants were informed they had the right to withdraw from the research at any time without penalty, and their contributions would be accordingly treated with full anonymity (i.e., the use of de-identified data and pseudonyms) and confidentiality (i.e., not disseminated beyond the scope of their approval). Finally, the research findings were treated with honesty and integrity, and the final thesis was designed to protect the biography, context and the roles of the participants through anonymising throughout the course of the research. The resulting steps ensured that participants could speak in a transparent environment and with honesty, without the possibility of personal or professional recrimination.

### *3.6.2 Data Storage*

In adherence to the protocols of the Australian Catholic University for maintaining anonymity and confidentiality, measures were implemented for the secure storage and protection of data. First, electronic data and audio recordings were kept secure by password protection on electronic storage and my personal computer. Second, printed data (such as interview transcripts, documentary evidence and survey and consent forms) were kept in a

lockable storage box, with access granted only to those directly involved in the research (i.e., myself as the researcher, the research assistant and my supervisors). In compliance with Australian Catholic University's Human Research Ethics Committee, all data will be erased and physical documents shredded after five years.

### *3.6.3 Emic-etic Status*

Given that qualitative research is generated through the sharing of participants' experiences, biases and subjectivity, it is important to manage the insider-outsider status (emic-etic). Yin (2017) states that there are qualitative researchers who conduct research that "view the possibilities of multiple realities as an opportunity, not a constraint" (p. 17). Indeed, as a part of delivering the diocesan school improvement strategy, I was interested in how my own insider status (emic) would be shared or contradicted by the divergent views held by the participants. This insider status is related to the internal characteristics of the group defined by its culture and functioning (Dwyer & Buckle, 2009). Having worked for the Diocese in either a school or system leadership capacity, I had worked with and knew several of the participants, but I was not a member of the executive leadership team when the Strategy was initially conceptualised and enacted. In fact, I had previously worked at one of the research sites and considered one of the participants as a trusted colleague and friend. Nevertheless, my emic-etic perspective meant that I came to this research with a sensitivity to understand school improvement in regional, rural and remote schools, and to explore how school leadership teams and system leaders were working together.

Between 2019 and 2023, I worked as a school and system leader and had either worked or had contact with several key diocesan personnel responsible for implementing the Strategy. In these instances, I could understand the common discourse between participants and understood the system languages and processes that were being implemented. I had conducted presentations in Principals' meetings and at an executive leadership meeting discussing the Strategy and the school's own responses. In my invitation letters to potential participants, I included my experiences and work background to establish a positive and trusting working relationship. By providing these details, it was hoped that the interviews would be broadened in terms of the quality and enhanced ethical standpoint, as well as ensuring my research findings could be of benefit to the schools and participants involved.

### 3.7 Limitations

This research is limited by several methodological concerns related to the skills of a neophyte researcher, participant selection, the data gathering as a part of the interviews and the cost of conducting the fieldwork. First, conducting semi-structured interviews and follow-up interviews was subject to the ever-increasing knowledge, understandings and competencies of the research assistant. However, the researcher assistant had extensive experience working in regional, rural and remote schools, and thus the research study pays justice to the experiences of system leaders and school leaders who work in that environment. In addition, the selection of twelve school and system leaders from across the Diocese led to the fact that there could be an exclusion of non-conformist voices to the way that school improvement in regional, rural and remote schools is conceptualised. Furthermore, if the intention of the school improvement measure was to assist students, families and teachers, these parties all pose potentially disparate perspectives on educational change in these contexts. However, the purpose of the research is in the evidence of processes that were enacted and the relationships that developed between system leaders and school leadership teams. Indeed, by focusing on these stories of educational change, the research design that *could* have been selected perhaps lends itself to an instrumental or intrinsic case study and conducting singular interviews. Yet, the exploratory case study was chosen as a research design because school improvement journeys were unique in each school context, and I wished to emphasise the patterns of relationships, processes, learnings and evidence that were being enacted. Furthermore, there was also the issue of cost and time of conducting fieldwork and the balancing of these concerns.

### 3.8 Chapter Summary

This research proposal identified the use of an exploratory case study to understand the evidence and processes of how system leaders and school leadership teams implemented change in rural, regional and remote schools. From the interpretivist perspective, research methods were applied to the research questions. Thus, this chapter has identified the philosophical background, contextual issues, participants, data sources, data analysis, quality, limitations, ethics and has presented a timeline for completion. Examining school and system leaders' perspectives that had significant interactions over three years, the methodological choice was an exploratory case study which developed a rich collection of data sources through semi-structured interviews, documentary analysis and a reflective research journal. Naturally, this led to the allowance for the voices and experiences of system leaders and

school leaders to emerge. Together, these present the research methodology as analogous with the purpose and research questions of the study. The exploratory case study was focussed to evaluate the evidence and processes that were used by the participants as they sought about enacting school improvement in regional, rural and remote schools.

## Chapter 4: Introduction to the School Improvement Ecosystem

In the realm of school improvement, the enactment of a Diocesan Strategy within a rural, regional, and remote Australian Catholic Diocese presents a narrative rich with insights and challenges. Chapter 4 of this doctoral thesis is an exploration of this narrative, providing a comprehensive presentation of data that chronicles the journey of school and system leaders as they navigate the complexities of implementing the Strategy. This chapter is pivotal, as it is informed by the relationships between leadership, policy, and processes, and offers a window into the lived experiences of those at the helm of change. The interpretivist stance adopted in this research emphasises the importance of the subjective experiences and perspectives of school and system leaders. Their voices, captured through interview excerpts, are not mere echoes but vibrant testaments to the multifaceted nature of the Strategy's impact. These first-hand accounts reveal not only the outcomes but also the processes of self-reflection, evaluation, and collective learning that have characterised the school improvement process. To afford a clear understanding of these narratives, this chapter is structured to first provide a general overview of the Strategy. This overview serves as a touchstone for interpreting the subsequent data and situates the reader within the specific educational and cultural context of the Diocese. Following this, the chapter delves into the historical evolution of the Strategy, tracing its origins and the pivotal moments that have shaped its trajectory.

Crucial to this exploration is a description of the key features and individuals that might be considered integral to the Strategy's implementation. This includes a detailed examination of the leadership structures, governance operations, and the development of instructional leadership that forms the backbone of the Strategy's architecture. The chapter further considers the pivotal role of the data ecosystem as the keystone of the school improvement strategy, delving into its development and practical application, which has facilitated a cohesive, system-wide management of student data. To this end, the innovative concept of a school improvement ecosystem, drawing from the work of Branson and Marra (2021), is presented as a guiding metaphor in this investigation. The school improvement ecosystem encapsulates the interwoven nature of people, processes, and data within the Diocese, reflecting a complex network of interactions akin to the natural ecosystems found in the environment. This metaphor is not only illustrative but also instructive, as it frames the subsequent tiered analysis—*macro* (leadership processes), *meso* (co-teaching), and *micro* (effective learning and teaching cycles)—that captures the overarching themes of the research. Inherent in this ecosystem is the dynamic 'Plan-Do-Check-Act' cycle, a model that

fosters continuous improvement and adaptation. This chapter further posits that co-design—a collaborative approach to strategy development (MacNeil, Butler, & Schnellert, 2023; Macklin & Zbar, 2021)—strengthens the ties between school and system leaders, thus enhancing the Strategy's effectiveness. It is through this collaborative lens that the evidence of impact is scrutinised, revealing the tangible successes and emergent challenges of the school improvement efforts.

Chapter 4 concludes by setting the stage for the in-depth analysis that follows in Chapters 5, 6, and 7, which dissect the micro, meso and macro levels of the school improvement ecosystem. Each chapter builds upon the last, crafting a layered understanding of the Strategy's implementation and its resonance across the varied dimensions of the educational landscape. As such, Chapter 4 is a narrative that weaves together the many threads of strategic school improvement within a Diocese that embodies the unique characteristics of its rural, regional, and remote identity. Chapter 4 is an invitation to engage with the stories, challenges, and successes that mark the journey of school improvement.

## 4.1 General Overview of the School Improvement Strategy

### *4.1.1 Introducing the Strategy*

The boundary for this case study was the experiences and perceptions gained by some of the participating system and school leaders who were personally involved in the Strategy and its implementation in a Catholic Diocese. The main impetus for this Diocesan Strategy was the realisation that school and system leaders had to work together to try to improve learning, teaching and wellbeing to overcome any inherent challenges associated with the Diocese's distance, isolation and resource inequity challenges. Figure 4.1 below provides an illustrated summary of the evolution of this Strategy across the timeframe from 2015 to 2020, inclusive. As this figure highlights, the introductory elements of the Strategy occurred first within the Diocesan Office itself, and this was then extended to include all schools within the Diocese. This figure represents an adapted version of a conceptual illustration originally used by the Diocesan Director to detail the sequential implementation of the Strategy from 2015 to 2020. It has been further modified to encapsulate the research insights gathered during this study, highlighting both the foundational steps taken within the Diocesan Office and their extension across all schools in the Diocese. This adaptation reflects a synthesis of the director's original work with the analytical insights derived from the research, aiming to illustrate the dynamic evolution and impactful reach of the Strategy throughout the diocesan educational landscape.


**Figure 4.1**: *An Illustration of the Sequential Implementation of the Strategy*

### *4.1.2 An Historical Overview of Implementing the Strategy*

As this Chapter explores the transformative educational strategies within a rural, regional, and remote Australian Catholic Diocese, it is essential to contextualise the narrative within a timeline that underscores the strategic evolution of the Diocese's initiatives. Presented herein is a timeline diagram (see Figure 4.1), which serves as a critical visual element illustrating the key academic works, as well as actionable strategies, from 2015 to 2020. This chronology not only recounts the progression of initiatives but also highlights the Diocese's commitment to an evidence-based approach to school improvement. This visual chronology is not merely a historical record but a structural basis upon which the Diocese has constructed its contemporary and future educational directions. By presenting this timeline, the interconnectedness of theory and processes is brought to the forefront, encapsulating the Diocese's dynamic response to the evolving educational landscape and its dedication to fostering an environment of continuous growth and learning.

In January 2015, the new diocesan educational office Director was appointed, who subsequently encouraged school and system leaders to read research literature focussing on school improvement. Key documents were also circulated that related to school improvement, laying the foundational groundwork for the Strategy, including influential literature such as Timperley's (2014) *A Framework for Transforming Learning in Schools*,

Fullan's (2011) *Choosing the Wrong Drivers for Whole System Reform*, Kotter's (1995) *Leading Change*, and Dufour's (1998) exploration of *Professional Learning Communities*. These pieces set the theoretical cornerstones for the subsequent strategic actions taken by the Diocese.

In this initial stage, system leaders and individual schools within the rural, regional, and remote Diocese established a cooperative relationship that was to be the basis for the Strategy. In those early days, the primary aim of the Strategy was to forge a mutually agreed-upon culture, mission, vision, and roadmap that could successfully adapt and scale across different schools within the Diocese. The Director was instrumental in creating a shared understanding of the strategic goals that were created during this stage, paving the way for scalable processes that aligned the individual schools with the broader diocesan objectives.

The initial stage of the scaling strategy involved the Director and the Executive Leadership team creating a blueprint for the Strategy. Preliminary data analysis from the participant interviews and documentary evidence identified six vital factors: i) relationships, ii) shared understanding and beliefs, iii) time, iv) vision, v) systemness, and vi) the CPLC. Firstly, constructing strong relationships among teachers, school and system leaders was instrumental for a scalable and cooperative culture. Secondly, aligning understanding and beliefs among all stakeholders was necessary for a unified drive towards shared goals. The data revealed that the Director was pivotal in providing adequate time management and resourcing for school improvement activities. Finally, the other essential themes for scaling the Strategy were a distinct vision, a collaborative approach (or 'systemness'), and the CPLC – a committed group of teachers, school leaders and system leaders.

The ensuing dialogue between the system leaders and the school leaders shaped a vision for how roles and processes needed to change to improve learning and teaching outcomes in the Diocese. It was perceived by both school and system leaders that the common view was that schools and system should both place a greater emphasis on student learning and the resourcing of schools and teachers through a team-based approach to school leadership. Importantly, this approach differed from previous diocesan policy documents that emphasised *compliance*, rather than school improvement. Such a view was captured in the following impression offered by school leader #9:

> I can see the difference, how – what the focus areas [of previous school improvement strategies] were, really, in those early years of my principalship on registration and compliance issues, really. Learning and teaching didn't even get a

> look-in, really, not from the system level. So, the impact that [the Strategy] has had on the system to build system-ness to improve student outcomes has been incredible because I can see how it's grown, and how important it is, and the difference it's made to staff and to students. [#9, school leader]

In 2016, the Diocese released the *Catholic Professional Learning Community* (CPLC) (2016), a policy document outlining a number of strategies and processes that could be adapted to a school context to improve learning, teaching and student wellbeing outcomes. This concept of a CPLC emphasised the expectation that any school improvement strategy had to be designed around a network of teacher, school, and system leaders engaged in dialogue and action to improve teaching. More specifically, the CPLC described the intended practical elements of the Strategy, which incorporated processes including case management meetings, learning walks and talks, and data walls. All these methodologies were directed towards offering solutions for teachers to improve their pedagogy in a collaborative way.

The strategic importance of this move towards the establishment of the CPLC is captured in the following words of the Diocesan Education Office Director from the e-bulletin document from 31 May 2016:

> I continue to be excited by the examples I see and hear about in schools as teachers *embrace the key ideas of a CPLC* in the interests of improving student learning. I hear teachers talking about student learning and not teaching! I hear about schools *setting up CPLCs* based on agreed standards of behaviour (norms). I see data walls showing student achievement and growth and subsequent case management conversations about individual student learning challenges. I see leaders encouraging their staff to *collaborate* on instruction, assessment and curriculum in a challenging environment of school improvement. I see more teams of staff stripping away hierarchy and *empowering* others to make decisions as we see we work with people, not for them. Risk taking is approved and encouraged. (Dioceasean office, 2016, p. 43; emphasis added)

Over the two years following the establishment of the CPLC, schools reported having benefited from the consistent policy messages received from the Diocese, and school and system leaders revealed that collaborative practices had improved. These school and system leaders recognised that the strengths of the Diocese, being a smaller network of school and system leaders championing the concept of working together, was having a considerable

impact on the implementation of school improvement strategies. As proposed by school leader #10,

> … our Diocese is relatively small, so we have really good connections across our school and the [Catholic education office]. They are a visible presence here and we engage in conversations about school improvement. [#10, school leader]

In addition, the Strategy outlined how school and system leaders were to be supported to ensure the success of the Strategy. In this way, the Diocese proposed that clear and consistent school leadership was essential in supporting the implementation of the Strategy.

In the two years that followed the publication of the Strategy, the Diocese implemented its strategic plan across all the schools in the Diocese. School leaders were asked to come together into school clusters and draft Annual Improvement Plans (AIP) that mapped out how the school leaders intended to transform and improve their schools with the available funding. The importance of the CPLC was further consolidated by the Director in an e-bulletin sent to all employees, where the AIP was described as:

> … *a core part of school business*. It documents a *sharp and narrow focus* on school improvement priorities and *provides clarity and purpose* for all members of the school community. The feedback provided to schools from this *rigorous process* informs planning at both the diocesan and school levels. For example, the Diocesan Strategic Improvement Plan addresses each of these features of school improvement. Specific goals are recorded during AIP planning each year and are replicated in each school's Annual Improvement Plan. (Diocesan Office, 2016, p .52; emphasis added)

Accordingly, system leaders within the diocesan office made changes to support the Strategy's implementation. How these school and system leaders, data and processes became the practised reality of this Diocese are now described as the key features of the Strategy.

### 4.2 Key Features of the Strategy

This section examines enactment of the Strategy and how the executive leadership team leadership and governance operated to ensure that school and system leaders created the strategic framework; how school and system leaders managed relationships fostered and

mandated through the Strategy, including the links created between school and system leaders; and how the various stakeholders carried out their roles and enacted the framework. Ultimately, this concept of the data ecosystem enabled the strategic processes and the primacy of co-design and collaboration to occur as a comprehensive platform. I will now turn to outline the relationships between central leadership, governance operations and the development of instructional leadership that, arguably, were the key features of the Strategy.

### *4.2.1 Central Leadership and Governance Operations*

One of the critically important positive partnerships that emerged during the analysis of the Strategy was that which formed between the system executive leadership team and the school principals. The executive leadership team comprised the Diocesan Education Office Director, Assistant Director, Head of Projects, Head of Finance, Head of Employee Services and three School Performance Leaders. As captured in the words of school leader #9,

> … the impact that [the Director] has had on the system to build *system-ness* to improve student outcomes has been incredible because I can see how it's grown, and how important it is, and the difference it's made to staff and to students.

Such a view was shared by system leader #6; when reflecting on the overall impact of the Strategy, they proposed that:

> … there's been a massive, massive change throughout the Diocese. I think that's the most exciting time for me in all the time that I've been here. [The Director] has done a magnificent job of building and improving a whole range of cultures within the organisation.

To maximise commitment and alignment across the Diocese, the Strategy was founded on the collective engagement in dialogue about policies, processes and practices with all personnel at the heart. School leaders described how system leaders broached innovative ideas *with schools*, rather than simply imposing them *on schools*, as well as engaging with each of the school's key role holders to embed the process of change management in school improvement activities. This engagement occurred at various stages throughout the Strategy implementation process and concerned matters associated with school improvement training,

the introduction of the literacy block, and the concepts of CPLCs. These are all described in more detail later in this chapter.

### *4.2.2 The Development of Instructional Leadership*

As previously mentioned, the development of Instructional Leadership as a concept was a pivotal decision to emphasise the importance of improving learning and teaching in classrooms, in which the development of a diocesan-wide culture was seen as the work of the highest priority. However, as the following system leader acknowledges, there were challenges in developing Instructional Leadership as a preferred mode of working:

> As we developed a culture that focussed on Instructional Leadership in schools, the very real demands of administration needed to be acknowledged and supported. Instructional Leadership requires a greater presence of leaders in the classroom to lead student learning groups, lead learning walks and talks, carry out teacher observations, lead professional learning teams, which may include benchmarking student work, analysing student performance data, and supporting students and teachers in calm classroom behaviours. (#5, system leader)

Each school's Instructional Leadership team included the School Performance Leader (Catholic Education Office person), the principal, the assistant principal, the religious education coordinator (REC), the school staff member appointed to the leader of pedagogy position, the professional educational officer (Catholic Education Office person), and the subject matter expert (Catholic Education Office person). The crucial role of this Instructional Leadership team was to ensure alignment between the system with the school AIP and the school's implementation of the Strategy. Moreover, the ultimate purpose of this team was to ensure that the school and system improvement processes were focused on the teacher in the classroom to be supported and challenged by competent leadership who held the knowledge and skills to build teacher capacity. The Instructional Leadership team and its relationship with the Strategy is illustrated below in Figure 4.2.


**Figure 4.2***: School Instructional Leadership Team and Strategic Improvement Plan*

Abbreviations: AP = assistant principal; CSO = Catholic Schools Office; LoP = leader of pedagogy; REC = religious education coordinator. Source: Diocesan Catholic Office, 2019.

*This illustration is based on internal documents from the Diocesan Catholic Office, 2019, and serves to visually communicate the team's structure and strategic role.

In addition to the introduction of the school Instructional Leadership team, there was an associated move to support each school principal's capacity to fulfil their Instructional Leadership role. To this end, the Director made several structural changes to school staffing allowances. These changes included the appointment of the Leader of Pedagogy role; increased release time for teaching principals and RECs; increased hours for support staff; increased staffing to support locally identified targeted interventions that increased the number of teachers in K-3; and increased numbers of middle leadership roles in many schools. In addition, the Director created a new Catholic Education Office role – the Subject Matter Expert – to complement the work of the local Instructional Leadership team in each school in the system. The Subject Matter Expert was a role with knowledge critical to schools, in areas such as pedagogy and inclusion, and their purpose was to:

> … build teacher knowledge, as well as building capacity in evidence-proven pedagogical approaches to the delivery of the syllabus (K-6). The work of the Subject Matter Expert: Curriculum and Assessment (K-6) is aligned with the 14 Parameters and System Non-negotiables. (Diocesan Office, 2020, p. 8)

In this e-bulletin document (Diocesan Office, 2020), an effective Instructional Leadership team was characterised by the following statements that were made explicit across the whole system:

- Being one team that is committed to learning together.
- Building relational trust through the work by inclusion, no judgement and fostering a shared responsibility for school improvement.
- Building relationships so that learning can occur through open communication and interaction.
- Site based coaching and feedback within an action research approach.
- Formation through multiple relationships and a respect for teacher and leader wellbeing.
- Leading explicit and specific work.
- Being data and research informed.
- An unrelenting focus on improved learning for all students.
- Working from the same explicit learning improvement agenda.
- Being bound by shared and mutually agreed accountability within the school.
- Providing time and additional CPLC time and space for a room for teachers to collaborate.
- Creating a professional learning culture that changes the nature and quality of conversations in the staff room.
- Having a Leader of Pedagogy with the time and expertise to support the principal's and leadership team's Instructional Leadership. (Diocesan Office, 2018, n.p.)

The concept of Instructional Leadership was established to focus on classroom learning, necessitating leaders' active engagement in educational activities and the support of administrative demands. This led to structural changes like forming school Instructional Leadership teams, which included new roles aimed at pedagogical support and teacher capacity building. School Performance Leaders were then introduced to connect the diocesan strategies with individual schools, ensuring that the system's improvement efforts were effectively implemented at the classroom level. This key role will be discussed in the next section.

### *4.2.3 The Link Between System and School: School Performance Leaders*

Another aspect deemed necessary for the Strategy's success was a productive working relationship between the Catholic education office and each school, which was facilitated by the introduction of the School Performance Leaders. The School Performance Leaders were a key system leadership appointment of three former principals whose role was to liaise between schools and the system. The introduction of this particularly important role arose from an awareness of the difference in the capacity of schools to function confidently and autonomously when striving to implement a complex school improvement agenda. As described by system leader #5,

> … there are some schools that you could give them complete autonomy, and they would be doing a great job. Some schools are not quite there yet for various reasons and probably need a bit more direction and [central system].

These School Performance Leaders were members of the Catholic Schools Office Executive Leadership Team and, thus, were accepted throughout the Diocese as key system leaders.

The key focus of this role was to build the capacity of the Diocese's school principals, the school's leadership team, and the school's Mission and Learning team to enable more effective and efficient leadership and management of the school improvement processes occurring in the school. The major Strategy document entitled, *Layers of Success* (2019), defined the scope of the School Performance Leader role in these terms:

> School Performance Leaders provide ongoing support to principals and their leadership teams. Our School Performance Leaders have a wealth of knowledge and experience as principals and are able to advise principals on all aspects of strategic planning, learning & teaching and community engagement. School Performance Leaders have at least weekly contact with principals via on-site school visits, phone calls, VC [Video Conference] meetings and principals meetings held each term which allow all principals to come together for professional learning, dialogue and collegial networking and support. (ibid., p. 8)

An example of the widespread appreciation for the introduction of this unique role was provided by school leader #10 when expressing the view that:

> … there are three system performance leaders and the way that they now work, they used to be called consultants and the work [now] is very different to what the consultants used to do. They really specifically worked with us on school improvement. They don't just come and sit in here and listen to us whine about stuff and have a nice time and enjoy a coffee and stuff. They actually really work with us. [#10, school leader]

Such comments reflect the centrality of the close system and school relationships in the successful co-designing of the Work Pack (described in Chapter 7.1.5) and stage plan processes of the school's AIP. In addition, the above excerpts also illuminate the commitment within the school's AIP towards building the system-wide school improvement knowledge and capacity. Furthermore, the building of system-wide school improvement knowledge and capacity strengthened the capability of system leaders to work together more effectively, as well as being able to work more closely with each school in its endeavour to develop and implement appropriate school improvement processes.

Taken collectively, the data obtained during the interviews identify the potential of what has worked when trying to implement school improvement processes. These include the pre-existing inequality across the schools in their capacity to cope with implementing a complex school improvement strategy, as well as the need for principals to not simply possess quality leadership practices themselves, but also to ensure the currency, extent, and relevance of their professional knowledge and the ability to inform their leadership processes with this knowledge that a view that was also held by some of the participating school leaders:

> The role of a school leader is necessarily evolving, and it is becoming increasingly evident that in the role of principal, one must consider the current research and not rely on historical ideas. [#11, school leader]

Part of this capability building included being receptive to the contextual needs of schools, as well as resourcing schools to enable them to improve learning and teaching outcomes. At the same time, the interview data and Strategy-associated documents also highlights the importance of schools and system leaders to provide a tailored solution and help build system-wide school improvement knowledge and capacity.

### 4.3 The Data Ecosystem: Nurturing a Culture of Evidence-Based Education

A significant influence upon the perceived credibility of this Strategy was its broader alignment with similar school improvement processes happening not only in other Australia Dioceses, but also, and arguably more importantly, by internationally acclaimed researchers. As one system leader described:

> We worked closely there with Helen Timperley, who came out of the Auckland pocket of experts. Then, more recently, I had embraced with my working in [school] and [the Diocese], the researchers in Toronto, in Ontario, in Canada, like Lyn Sharratt and Michael Fullan. [#4, system leader]

This participant deemed the Ontario researchers of DuFour, Timperley, Fullan, Hargreaves, and Sharratt as being particularly influential in contributing to change within the Diocese. This Ontario-based research group is acknowledged globally as having encouraged school and system leaders worldwide to explore a more analytical approach to school improvement by using student performance data. The impact of using published methods from these well-regarded educational researchers not only informed the Strategy's direction but also it provided an evidence-base for school and system leaders to draw on. As Then the critical issue became how the school and system leaders used data analytics and insights to inform planning strategies in a purposeful way. Thus, the executive leadership team embraced the need for system-wide professional learning in student data usage. This became known as the *data ecosystem* concept within the Strategy.

The intention behind the use of a data ecosystem was to build an evidence-based culture to improve faith, wellbeing, and learning and teaching outcomes in the Diocese. The processes that assisted with the data ecosystem involved understanding how the evidence-based culture was to be implemented within the diocesan system of schools and how it facilitated precision pedagogy to tailor students' learning pathways. Appreciating how education and data capabilities worked together seamlessly was vital for the system leaders to design a data ecosystem for the future. The creation of a data ecosystem presented an opportunity for school and system leaders to embrace school improvement with innovative processes. In the Strategy document titled, *Building the Data Ecosystem in the [Diocese] System of Schools* (2020), the executive leadership team outlined the vision and strategy for the data ecosystem, emphasising the why, what and how of the diocesan data strategy. In a statement from the document, the following views were espoused:

> As data has begun to influence school improvement, an underpinning philosophy of school improvement has emerged. That is, the use of data captured in an ecosystem, expertly used, will have transformational results for wellbeing, learning, and teaching outcomes. (Diocesan Office, 2020, p. 3)

This evidence-based school improvement culture involved the Diocese using longitudinal student performance databases in parallel with teachers consistently using periodic diagnostic testing to pinpoint accurate pedagogy. The data obtained from this process informed the vital improvement processes in place in the school. For example, student performance data was used to inform learning walks and talks and case management meetings and, thus, determined the best next steps in the students' learning and teaching cycle. From the *Building the Data Ecosystem in the [Diocese] System of Schools* (2020), it was expounded that, "a school improvement model that focused on precision pedagogy can improve learning and teaching outcomes and be less likely to require triaged support" (Diocesan office, 2020, p. 4).

Furthermore, this evidence-based school improvement culture was founded on the principles of performance, accessibility, and usability. The selection of performance measures aimed to capture longitudinal data on how students were performing over time and whether there was improvement in learning and teaching outcomes. The development of new analytics, such as augmented analytics to monitor at-risk students or machine learning, was then stated as "a possibility in the not-too-distant future for the Diocese" (Diocesan Office, 2020, p.3) and became a reality. Access to data was also seen as a critical feature to monitor the effectiveness of an evidence-based culture and included factors such as relevance, timeliness, choice, and range of data sets. At a broader policy level, there had been much recent policy activity in schools and system networks that had focused on increasing timeliness of data, and thus usability of access to data sets, particularly in redeveloping NAPLAN for quicker turnarounds. The perceived benefits of this data-based evidential approach to school improvement in the Diocese is captured in this excerpt from the presentation of a case study at a conference into rural, regional and remote education by the director in May 2021. Here, it was claimed that:

> … there is clear evidence that this approach provides better outcomes for faith, wellbeing, learning and teaching, and school improvement. Based on our research, we have developed clear recommendations for the improvement of the [diocesan]

> system of schools. Accordingly, these recommendations include an investment in the educational horizon in the form of a data ecosystem. The data ecosystem is a long-term investment in school improvement focussed on people, processes and data. This investment will lead to improved faith, wellbeing, learning and teaching outcomes. Underpinning these school improvement outcomes will be access to the data ecosystem to meet rising demand. (Diocesan Office, 2020, p. 2)

Moreover, the establishment of a business intelligence platform, pivotal to guiding the procedural aspects of each school's AIP, represented a significant undertaking. This comprehensive effort demanded substantial coordination from both the Diocesan system and the schools, with the task of organising and operationalising professional communication falling to the School Performance Leaders. The business intelligence platform comprised reports that prepared, analysed, and displayed student and school data, which all contributed towards refining the questions about each school's AIP.

Thus, as mentioned above as being a key part of the efforts to enhance school improvement, a comprehensive data ecosystem was established. The ecosystem allowed the user to access school-specific information, student pathways, and key metrics on student progress. These different aspects of the ecosystem were accessed from a "landing page". As illustrated in Figure 4.3 below, this "landing page" served as the school's guiding map of the data ecosystem, providing key navigation points to explore various dimensions of the school's context.

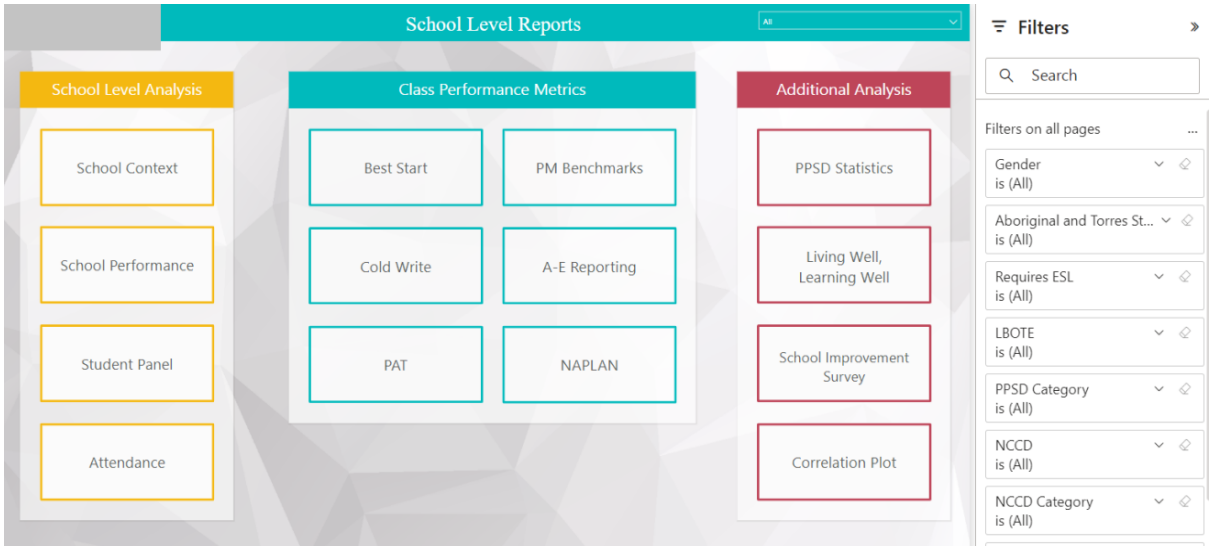



**Figure 4.3***: The School Landing Page of the Data Ecosystem*

**Note: Figure 4.3** is a system artefact from the actual Power BI data ecosystem used within the Diocese. It visually captures the functional layout of the data ecosystem's landing page, offering real-world insight into the interface that educators, school leaders, and system leaders interact with to access vital information and analytics.

This data ecosystem also provided access to crucial perception data gathered through surveys from students, parents, and staff. This valuable feedback was a pulse check for the Diocese's performance and contributed to the overall improvement strategy by providing teachers, school leaders and system leaders with access to information. A significant focus of the data ecosystem was given to equity data, particularly highlighting the experiences and performance of students with disabilities. Furthermore, the data ecosystem comprised a section dedicated to correlation analysis, an indispensable tool that is often considered by some as the 'black box' of school improvement (Madden, 2022). This function allowed for an in-depth exploration of the relationships between various factors captured by the data ecosystem, thus providing actionable insights for strategic interventions in the educational setting.

Recognised as an essential benefit to both school and system leaders of the Diocese, the data ecosystem contributed to shifting school improvement towards an evidence-based culture. Furthermore, this comprehensive school improvement strategy incorporated increased teacher voice in decision-making, a different utilisation of school improvement data to inform and drive learning, and significantly expanded school involvement in defining the direction of school improvement. Over half the interviewees emphasised the necessity of

readily available school improvement data, acknowledging its crucial role in shaping school improvement. For example, school leader [#9] encapsulated this sentiment by stating:

> *Data is essential to have* – if you are going to have student improvement at a decent level, I think that system-ness is key to that. We have to have a common, shared understanding, and we have to be all singing from the same hymn books. (school leader, #9; emphasis added)

The school leaders' response highlighted the consensus on the importance of a unified, data-informed approach to facilitate effective school improvement.

In addition, many participants spoke of how the Diocese shifted from schools working in isolation to that of a more systematic direction, focusing on creating a culture that provides consistency of processes. One participant described how the concept of a "one stop shop" for school improvement data was an incentive to have systemised practices for school improvement. Furthermore, the data ecosystem was able to aid teachers, school leaders and system leaders by allowing them to view student achievement and progress by tracking learning, teaching, and wellbeing outcomes. By tracking this student performance data, a rallying professional understanding, which became a hallmark of this strategy was that,

> … every child deserves to have a year's worth of growth, no matter where they sit at the beginning of the year, they need a year's worth of growth and if not, what's going on, what are you not doing and what do we need to do about that. [#8, school leader]

In terms of school improvement data specifically, #5, system leader talked passionately about shared beliefs and values or the development of the data ecosystem in the context of the school improvement strategy:

> The major change of processes is using data to lead learning. One of the things that we have done is to create a data ecosystem. In terms of looking at the data ecosystem, we can drill down and look at our learning and teaching outcomes and better target resources for school improvement. [#5, system leader]

Another participant talked about trying to imbed professional learning into the school's culture whereby the use of school improvement data became a normal part of school

improvement practice. These relationships between school and system leaders are enhanced, with the outcome being improved student outcomes, as this school leader describes:

> I think in the past few years it's working its way to finding a nice balance between helping schools with servicing them and supporting them in the agenda; setting the agenda, to some extent, in collaboration with schools, but working with them and supporting them in achieving learning outcomes. [#7, school leader]

In concluding this section, the Diocese's strategy for building a data ecosystem was a transformative endeavour, moving beyond data generation in isolation, to fostering a culture of evidence-based decision-making. This shift was pivotal, enabling a precision-pedagogy approach that personalised learning and supported the Diocese's commitment to faith, well-being, and teaching outcomes. Thus, the establishment of the data ecosystem became the cornerstone of a school improvement model that championed progress through informed, data-driven actions.

### *4.3.1 Introduction to the Notion of a School Improvement Ecosystem*

As described in the previous section, a foundational element of the Strategy was its unified system-wide approach to student data captured by the ecosystem and using that data to improve learning, teaching and wellbeing outcomes' which became known as the data ecosystem concept. Furthermore, it was described how this data ecosystem concept presented as an opportunity for school and system leaders to embrace school improvement with innovative processes in a strongly collegial and confident way. Given the centrality of this concept within the Strategy, and the crucial role that relationships and cooperation played in all aspects of this Strategy, the ecosystem concept has been adopted as its overall distinctive and distinguishing feature and, thus, is expanded upon in the remainder of this Chapter to embrace and describe the Strategy holistically.

The concept of an ecosystem originated in the natural sciences to describe the intricate interactions and relationships within the natural environment. According to Branson and Marra (2021), an ecosystem consists of "systems or networks of elements that are interacting and relating to each other within a clearly discernible boundary defined in either physical or functional terms" (p. 4). They further emphasise the defining characteristic of an ecosystem, stating that "organisms in an ecosystem maintain relationships and interactions between and among each other, as well as their external environment, for the purpose of

obtaining basic life requirements" (ibid., p. 4). One example of an ecosystem commonly acknowledged in the natural sciences is that of the water cycle.

Notably, during this case study, the Diocese experienced seven years of drought followed by flooding rains for three years as a part of the global weather patterns associated with climate change. The water cycle has been a critically identifying feature of the region associated with this study. Hence, the water cycle provides a helpful analogy for illustrating how the Diocesan's school improvement ecosystem can be constructed and understood. During drought, water shortages negatively impacting agriculture, wildlife, and the regional, rural, and remote communities that relied on water for drinking and other purposes. In fact, one of the school leader's towns completely ran out of water, with the river having run dry, meaning water had to be transported into the town via truck. This shortage of water devastated the local economies of the towns, which were primarily based on agriculture, and, by extension, the schools. In contrast, during the years of flooding rains, the Diocese experienced abundant water, which led to new growth and increased productivity in agriculture and related tertiary industries. However, this abundance of water led to flooding and other negative consequences such as a mouse plague, damage to infrastructure and crops and towns being isolated for considerable amounts of time.

To provide a clearer and simpler illustration of this water cycle ecosystem concept, Figure 4.4 is presented below.

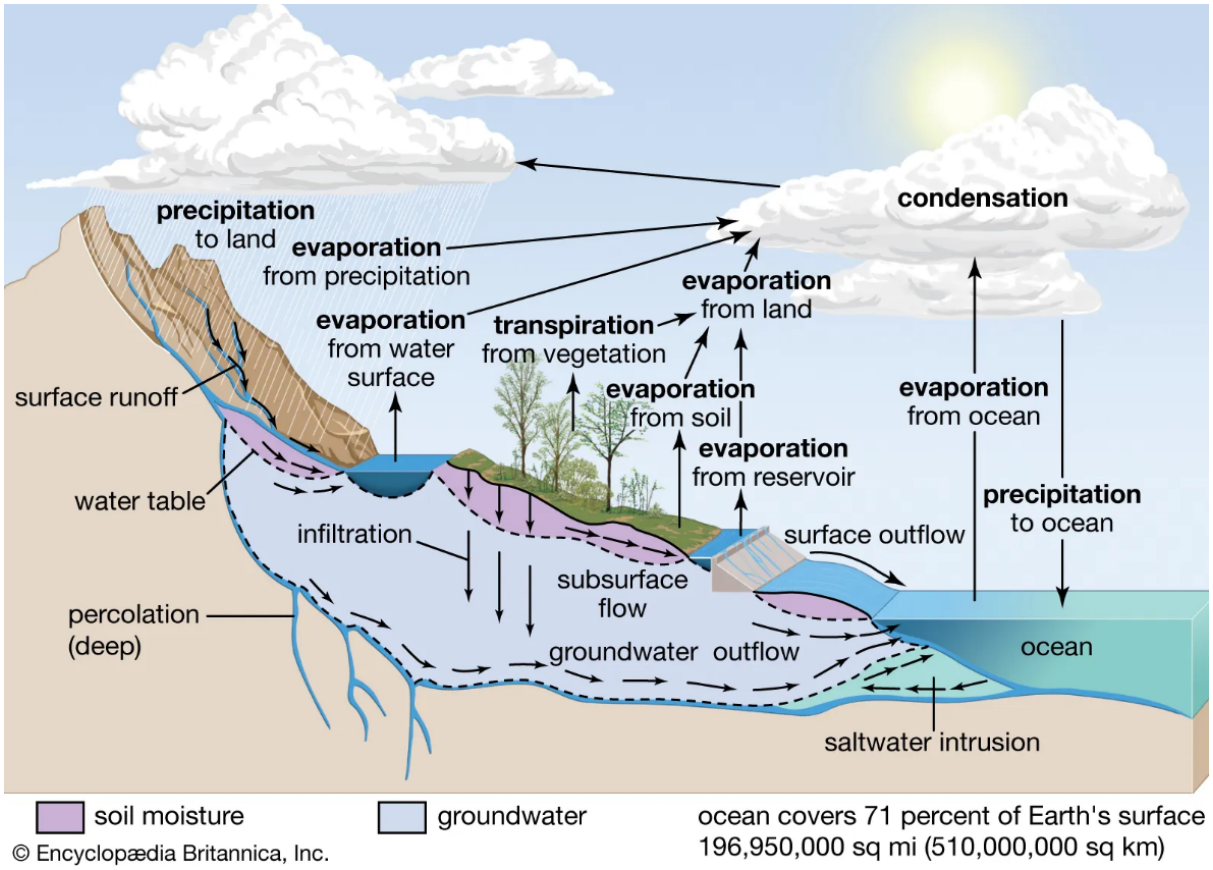



**Figure 4.4**: *An Illustration of the Water Cycle Taken from Within an Ecosystem*
Image Credits: Water Cycle by Encyclopaedia Britannica, Inc. (2023).

In this illustration, the water cycle is a natural process that describes the movement of water through the Earth's atmosphere and hydrosphere. The water cycle process is driven by solar energy and is essential for maintaining Earth's water balance and the survival of all living organisms (Wang et al., 2021). Also, this illustration of the water cycle consists of four main steps: evaporation, condensation, precipitation, and runoff. During evaporation, solar energy causes water molecules to become energised and transform from liquid to gaseous, rising into the atmosphere (Carrier et al., 2016). Once in the atmosphere, the water vapour cools and condenses into tiny droplets or ice crystals, forming clouds through the process of condensation (de Jong, 2005). Then precipitation occurs when the clouds become saturated and release their moisture through rain, snow, sleet, or hail (Shi, 2020). This precipitation may either soak into the soil or runoff into rivers, lakes, and oceans, where it will be subject to the sun's heat and undergo evaporation once again, thus beginning the cycle anew. This continuous process of water movement and transformation helps regulate water distribution across the Earth's surface and is a critical component of the planet's hydrological system

(Rosario Vidal-Abarca et al., 2020). Understanding the water cycle and its dynamics is essential for environmental and climate research, and for informing water resource management and conservation efforts.

Given this illustration, and a brief explanation of what constitutes a water cycle in a natural ecosystem, this research adopted a similar structure to depict the conceptual framework of the school improvement ecosystem that emerged from the data analysis process associated with this study. In this regional, rural and remote Diocese, a new director's vision for creating the classroom (and the relationships between the teachers and students) at the heart of the Strategy provided the catalyst for change. As one research participant phrased it, the key was to "engage in dialogue through the schools and let the 'answers' emerge" and to "join the dots" (#5, system leader). This can be evidenced in strategic documents such as the *Living Well, Learning Well Framework*, which states:

> … [a] universal and unconditional positive regard for children and young people, and a high regard for the collective capacity of a school staff team to increase learning, well-being, and life-opportunity outcomes for children and young people. (Diocesan Office, 2020, Year, p. 2).

It is noted from this *Living Well, Learning Well* framework that re-centring on an ethical purpose for education had further shaped the strategic direction and became part of the discussion for the next phase of strategic planning. By leveraging the expertise of teachers, school leaders and system leaders, the Diocese implemented a comprehensive school improvement ecosystem that promoted the classroom as the heart of school improvement. Thus, the researcher identified areas of commonality that were conceptualised as a school improvement ecosystem.

### 4.4 Presenting the School Improvement Ecosystem

As we navigate through the complex world of school improvement, the Strategy unveils itself not merely as a blueprint but as a dynamic relational entity, akin to the natural world's ecosystems. This analytical creation, depicted in Figure 4.5 below, is my own synthesis of the research data, presenting an innovative comparative analysis between the cyclic nature of school improvement processes and the water cycle. This analogy is crafted to elucidate the complex, interconnected, and cyclical essence of fostering educational excellence within our schools. As shown in Figure 4.5. below, the Strategy incorporated the key distinguishing

relational features of an ecosystem because it automatically incorporated the mutual and equitable sharing of all stakeholders' (school leaders, system leaders and teachers) knowledge, skills, and behaviours, as well as the cyclic (non-linear) learning gained throughout the process. An example of the themes identified were collaboration and synergy, interconnectedness, and flow, as these were observed to be strong themes throughout the data. These themes will be defined and further discussed later in the chapter.

## School Improvement Ecosystem – Conceptual Framework – Macro, Meso and Micro Level Approaches

| Level of Approach | Context | | Processes | | | | | Evidence of Impact |
|---|---|---|---|---|---|---|---|---|
| | Key Metrics | Description | Definition, Participants and Cycle | Phase 1 | Phase 2 | Phase 3 | Phase 4 | |
| **Macro** Leadership Processes | **Overall student achievement, Staff satisfaction, Community engagement, Effectiveness of implemented strategies** | • Measured through standardized testing, internal assessments, and progress reports for student achievement.<br>• Staff satisfaction can be gauged through staff surveys, focus groups, and regular check-ins.<br>• Community engagement can be assessed through surveys, attendance at school events, and participation in parent-teacher conferences.<br>• Effectiveness of implemented strategies can be assessed through performance metrics and feedback. | **Definition:** School and System-wide, overarching strategies and processes for school improvement.<br>**Participants:** System leaders, school leaders, teachers<br>**Cycle:** PDCA | **Plan: Timing and opportunity**<br>Defining objectives, strategies, and goals based on context and available resources. | **Do: Collaboration and synergy**<br>Working together to implement strategies and initiatives, leveraging the strengths of each participant. | **Check: Adaptation**<br>Evaluating progress, identifying areas for improvement, and making necessary adjustments. | **Act: Renewal and Replenish**<br>Continuously refining and renewing practices to maintain momentum and improve overall effectiveness. | **Improved student outcomes, increased teacher satisfaction** |
| **Meso** Co-teaching | **Degree of teacher collaboration, Availability and effectiveness of professional development opportunities, Sharing of best practices among staff** | • Teacher collaboration can be evaluated through observation and surveys.<br>• Professional development opportunities can be assessed through participant feedback and observing changes in teaching practices post-training.<br>• Sharing of best practices can be tracked and measured via performance metrics and feedback. | **Definition:** Collaborative processes and relationships among educators to enhance learning and teaching.<br>**Participants:** School Leaders, teachers and System Leaders<br>**Cycle:** Co-Teaching | **Co-planning: Iterative**<br>Collaboratively designing lessons, identifying learning objectives, and determining instructional strategies. | **Co-Teaching: Interconnected**<br>Jointly delivering instruction, leveraging each teacher's expertise to support diverse learners. | **Co-Debriefing: Collection and monitor**<br>Gathering, moderating and analysing data to assess student progress and instructional effectiveness. | **Co-reflecting: Abundance and quality**<br>Reviewing, discussing, and refining instructional practices to improve student outcomes and teacher collaboration. | **Improved teacher collaboration, increased student engagement**<br>**Improved correlation and accuracy of judgment with assessment** |
| **Micro** Effective Learning and Teaching Cycle | **Individual student performance, Student engagement, Classroom climate, Teacher effectiveness** | • Individual student performance can be measured through assessments and grading.<br>• Student engagement can be gauged through participation metrics and surveys.<br>• Classroom climate can be evaluated through observation and student feedback.<br>• Teacher effectiveness can be measured through student performance, feedback, and observation. | **Definition:** Learning and teaching processes focused on student outcomes and teacher effectiveness.<br>**Participants:** Teachers, School Leaders, and System Leaders<br>**Cycle:** Learning and Teaching Cycle | **Using data to lead learning: Source**<br>Gathering and analysing data to inform instructional decisions and target specific student needs. | **Targeted teaching: Flow**<br>Customising teaching to address individual student needs, promoting growth and achievement | **Focused feedback: Recirculation**<br>Providing timely, specific, feedback to guide student learning and inform instructional adjustments. | **Strong assessment: Balance**<br>Utilising diverse assessment strategies to measure student progress and ensure a balanced approach to teaching and learning. | **Improved student learning outcomes, increased teacher effectiveness** |

**Figure 4.5** *School Improvement Ecosystem*

***Note:** This figure represents my own analytical insights, conceived to illustrate the parallels between the cyclical processes of the school improvement ecosystem and the natural phases of the water cycle. It aims to provide a conceptual lens through which the interconnected dynamics of educational improvement can be better understood and appreciated.

This illustration also shows how the comparison between the school improvement ecosystem and the water cycle is based on the idea that both are cyclical processes that involve movement and interaction between different components. The nature of school improvement is complex and involves understanding the context, processes and evidence of impact. The different levels of the school improvement ecosystem, including the phases of the school improvement, can be compared to the different stages of the water cycle, such as evaporation, condensation, precipitation, and runoff. In both cases, there is a continuous flow and movement of elements, with each component depending on the others to function effectively. Just as water needs a source to emanate from, and a process of renewing and replenishing to continue its cycle, the school improvement ecosystem requires a shared vision, continuous evaluation and adjustment, and a culture of improvement to sustain its cyclical processes. Furthermore, just as the water cycle involves the stages of evaporation, condensation, precipitation and runoff, the different levels of the school improvement ecosystem also involve different stages or phases. For example, the PDCA cycle at the macro level involves planning, doing, checking, and acting. Thus, the comparison between the school improvement ecosystem and the water cycle emphasises the interconnected and cyclical nature of the different components of the ecosystem, and the need for a coordinated and holistic approach to sustain the process of improvement.

This conceptual framework will guide the structure of the discussion for the remainder of this Chapter. Hence, this chapter's discussion will begin by describing the three proposed school improvement activity levels defined as Micro, Meso, and Macro (these will also be discussed further in the following chapters). Next, the Chapter describes the specific activities at each of these levels across each of the four-step improvement processes of the Plan, Do, Check, and Act cycle (PDCA). The Chapter concludes with a summary of the new learnings that were gained from data analysis in the study of this particular school improvement strategy based upon it being viewed and understood through an ecosystem lens.

### 4.5 Delineating the Three Levels of School Improvement

This section explains the results obtained from analysing interview responses and document reviews related to the Strategy. Following the methodology underscored by Creswell (2009), the data analysis in qualitative research involves categorising the data into themes and descriptions to ensure the validity of the information. The journey began with an initial analysis using Microsoft Power BI canvases, which were instrumental in laying down a preliminary understanding. A network data map, sentiment analysis, and keyword extraction

(see Chapters 3.47 to 3.4.10 and Appendix B) collectively contributed to the creation of preliminary theoretical categories.

Next, the keyword extraction canvas played a pivotal role in pinpointing phrases and themes. This led to a more profound understanding of the school improvement ecosystem, further enriching the initially developed categories. To delve deeper, follow-up interviews were conducted with 12 school and system leaders. These conversations were thoughtfully structured to correspond with the preliminary theoretical categories, adding depth to the initial understanding. Upon analysing the data from this second round of interviews, a comprehensive theory of the school improvement ecosystem emerged. This process comprises four interconnected steps structured across three tiers: *macro*, *meso*, and *micro*. It should be emphasised that school improvement is an intricate process that unfolds across various strata of the school improvement ecosystem. The *macro, meso*, and *micro* levels represent distinct yet interconnected tiers of influence that shape educational outcomes. In this section, how each level contributes to the Diocese's overall capacity for change and improvement is explored, drawing on the data collected from interviews and documentary evidence.

At the *micro* level, the central processes of teaching and learning occur. I would argue that it is at this level where the direct impact on students is most tangible, as teachers' instructional strategies and interactions with students in the classroom. The *micro* level encompasses the day-to-day experiences of students and the pedagogical decisions made by teachers that cater for individual learning needs. The introduction of specific strategies such as the uninterrupted literacy block signify the translation of *meso* and *macro* intentions into classroom practice. My analysis of interview and documentary data noted that there were 75 references to *micro*-level practices, highlighting the significance of classroom-level interventions in achieving the Strategy.

The *meso* level serves as the organisational nexus where the system's directives are interpreted and enacted within individual school communities. It is at this level that schools undertake the task of embedding new strategies into their unique contexts, tailoring system-wide initiatives to their local environments. The *meso* level is characterised by collaborative professionalism, where teachers and leaders engage in deep dialogue and inquiry to adapt *macro* policies into effective school-based practices. For instance, the co-construction and use of Data Walls within schools to monitor student progress exemplifies *meso* level activities. My data analysis revealed 76 instances where *meso* level adaptations were critical in translating systemic objectives into actionable improvements.

At the *macro* level, the focus was on the overarching structures, policies, and standards that govern the educational landscape. This level encompasses the systemic transformations initiated by the Diocese to implement school improvement. Strategic planning at the *macro* level aims to align resources, practices, and visions to foster a cohesive approach to educational excellence. The implementation of the AIPs illustrates the macro level's role in driving change by setting expectations for school performance that are consistent across the system. This broad perspective ensures that school improvement is not an isolated endeavour but a systemic pursuit, as evidenced by the 94 occurrences of *macro*-level strategies in the interview data.

The dynamic interplay between the *macro, meso*, and *micro* levels creates a complex tapestry of actions and interactions that collectively contribute to school improvement. Understanding the distinct yet overlapping roles of these levels is crucial for educational leaders aiming to foster a culture of continuous improvement. The data that has been collected in this exploratory case study offers a rich illustration of how there needs to be a comprehensive strategy for enhancing teaching and learning outcomes. An integrative framework that acknowledges the contributions of each level ensures that school improvement efforts are both systematic and sensitive to the nuances of individual classrooms and school communities.

For the visualisation presented in Figure 4.6, it is my own creation, derived from the utilisation of Power BI for thematic analysis and keyword extraction from interviews and documents within the school improvement research context. This figure serves to quantify and visually represent the thematic occurrences identified throughout the data analysis, offering a clear, empirical basis for understanding the distribution and significance of themes such as 'People', 'Systemness', and 'Process'. The figure's inclusion not only adds depth to the textual analysis but also provides a visual summary of key insights, emphasising the centrality of human elements in educational improvement strategies. By integrating this analytical creation, I aim to illustrate the nuanced interplay of themes within the educational ecosystem, reinforcing the importance of a holistic approach to understanding and addressing the complexities of school improvement.

A set of 12 theoretical categories further substantiates this model, as depicted in Figure 4.6 below. In the journey to uncover the dynamics of school improvement within the Diocese, a wealth of data was collected, capturing the essence of educational progress and the multifaceted factors influencing it. The exploratory nature of this research project required an approach that allowed for an in-depth examination of these factors. This methodology

facilitated a balance between the breadth and depth of the data, offering a holistic view of the educational landscape under study.

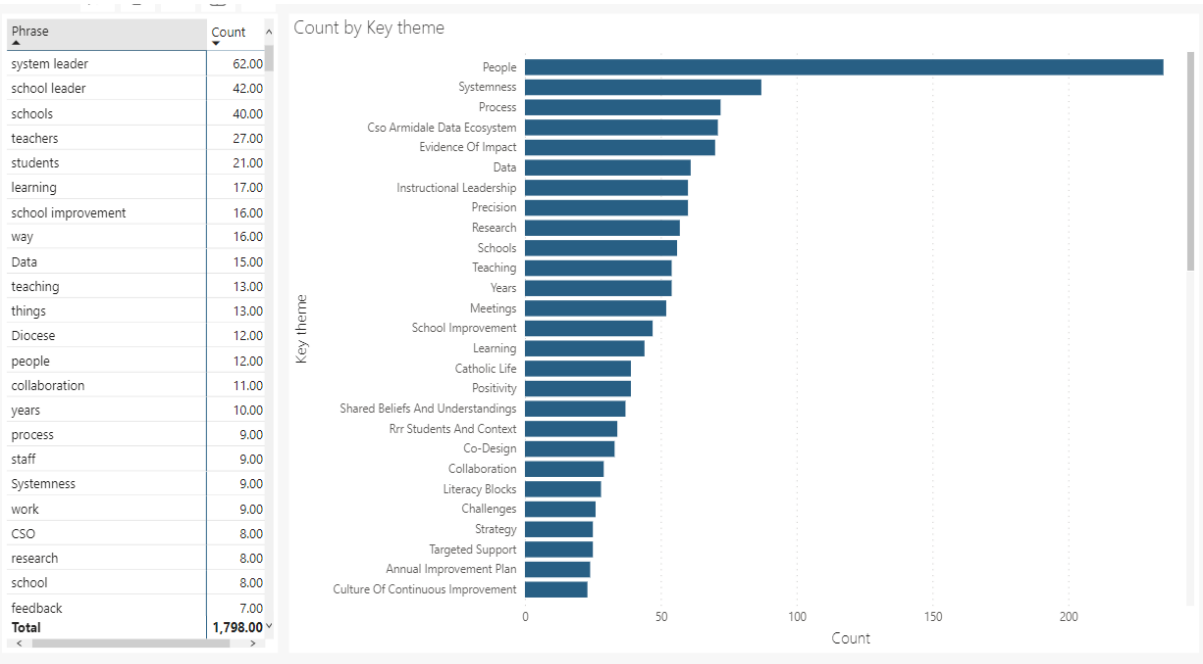



**Figure 4.6***: Keyword Extraction Canvas*

***Note on Figure 4.6:*** This figure is my analytical creation, using Power BI for thematic analysis of school improvement data. It quantifies key themes like 'People', 'Systemness', and 'Process' to highlight the complex dynamics within the educational ecosystem.

Central to the findings of this exploration was the thematic analysis that yielded rich themes, each representing a component of the interview data with school and system leaders. A key aspect of this analysis was the quantification of theme occurrences, which provided an empirical basis for understanding the relative prominence and significance of each theme within the discourse. Figure 4.6 presents the frequency of identified themes, with 'People' emerging as the most prevalent theme, with a count of 235. This reinforces the concept that at the heart of educational strategies and interventions are the individuals - students, teachers, school and system leaders whose roles are paramount in the realisation of this Dicoesan Strategy's objectives and goals. Following 'People', the theme of 'Systemness' appeared 87 times, suggesting the importance of systemic coherence and alignment in school improvement. The theme of 'Process', with a count of 72, is evidence of how processes played an important part in the enactment of the Strategy by school and system leaders. The remaining themes, while less frequent, are no less important. 'Evidence of Impact' and 'Data', with counts of 70 and 61 respectively, indicated a strong orientation towards

approaches that improved faith, learning and teaching outcomes. 'Instructional Leadership' and 'Precision', both with counts of 60, point to the focus of the Strategy within the Diocese. These quantitative findings are enriched by qualitative data gleaned from interviews and document analysis, which provide context and depth to the numbers.

The interplay between these themes paints a picture of a complex ecosystem where each element interacts with and impacts the others. For example, the theme of 'School Improvement', mentioned 47 times, cannot be fully understood without considering the 'Culture of Continuous Improvement' and 'Shared Beliefs and Understandings', suggesting an intricate web of influence and interdependence. As I reflected on this data, it became apparent that the factors contributing to school improvement were diverse and interrelated. This broad perspective ensures that school improvement is not an isolated endeavour but a systemic pursuit, as evidenced by the 94 occurrences of *macro*-level strategies in the interview data.

### 4.6 Chapter Summary

As a research approach, the school improvement ecosystem as laid out in Chapter 4 becomes clear. The Strategy dissected is not just a recount of events within a rural, regional, and remote Australian Catholic Diocese; it is a roadmap for school improvement. The interpretivist stance adopted has illuminated the subjective realities of leadership and change, offering valuable insights into how a Strategy can be effectively tailored and implemented in complex environments. The significance of this research lies in its potential to inform and inspire similar endeavours across varied educational landscapes.

The transition to the *micro-meso-macro* analytical chapters is not merely a shift in focus; it is an extension of the understanding that the success of school improvement strategies is deeply embedded in the confluence of leadership, policy, and actionable processes. These next chapters will serve to underscore the practical implications of the Strategy, providing a nuanced understanding of how such strategies can be operationalised to achieve systemic improvement in student learning outcomes. The next chapters are a demonstration of how strategic, data-informed and collaborative approaches to school improvement can result in meaningful change, setting a precedent for future initiatives. In essence, this chapter and those that follow embody a comprehensive response to the critical question of how school and system leaders work together to achieve evidence of impact.

The following chapter will explore the themes developed in Chapters 4 of contextual considerations, purposes and motivations, and approaches to school improvement within the

Strategy. It will offer both practical and conceptual insights regarding the ways in which collaboration between school and system leaders enacted school improvement within the rural, regional, remote Catholic Diocese. This theme will be explored in Chapter 5, where the case study will propose the first contribution of this thesis. Chapter 5 will also offer the contribution of the concept of a school improvement ecosystem, which explores how this study furthers understanding school improvement in regional, rural and remote Dioceses. Also in Chapter 5, the case study demonstrates how school and system leaders work collaboratively to achieve a common goal. The processes of school and system leaders are crucial to the enactment of school improvement.

# Chapter 5

## 5.1 Introduction: (Micro) Effective Learning and Teaching Processes

This chapter explores the complexities of the school improvement ecosystem within the Diocese, emphasising the importance of contextual comprehension alongside the learning and teaching processes that contribute to the overarching Strategy. I have structured this chapter to reflect the Strategy's developmental approach, starting at the *micro* level and expanding through *meso* to *macro* levels in the following chapters. Doing so emphasises the vital importance of building the Strategy from the classroom up, thereby anchoring school improvement in the authentic daily practices of teaching and learning. Initially, I outline the key metrics and descriptions pivotal to school and system leaders during the Strategy's formulation, drawing from a rich account provided during the interviews and document analyses. These insights underscore the significant contextual sensitivities that come to the forefront when leaders collaborate on school improvement. Subsequently, the chapter investigates the "Effective Learning and Teaching Cycle", a pivotal element of the school improvement framework. This cycle intersects the broad environmental levels and encapsulates essential phases, such as *Use data to lead learning, Targeted teaching, Focused feedback*, and *Strong assessment.* Through a detailed visual representation, the complex interplay among teachers, school leaders and system leaders within the school improvement ecosystem is clarified, which helps highlight how these components collectively foster educational advancement at the micro level.

## 5.2 Understanding the Context

Given this section focuses on the structural elements of the school improvement ecosystem, I will now delve into the specific vertical elements integral to its construction. As seen in Figure 5.1 below, the blue vertical columns delineate the 'Context' within the layered horizontal levels of macro, meso and micro, bringing into relief the environmental factors that influence school improvement processes. Understanding the context or the health of the school improvement ecosystem was essential for fostering an environment conducive to growth and development. To comprehensively gauge the vitality of the ecosystem, it was necessary to consider the context in which the Diocese operated and use system health indicators to measure its overall effectiveness. Figure 5.1 represents how context played a significant role in understanding the unique challenges and opportunities a Diocesan school

faced and took into account factors such as student achievement, staff effectiveness, and community engagement. The remainder of this section will then delve into the distinguishing contextual characteristics at each of the macro, meso, and micro levels, and the key metrics for the Strategy that facilitated the measurement and understanding of the health of the school improvement ecosystem at each of these levels.

| Context | | |
|---|---|---|
| Level of Approach | Key Metrics | Description |
| **Macro**<br>**Leadership Processes** | Overall student achievement<br>Staff satisfaction<br>Community engagement<br>Effectiveness of implemented strategies | • Measured through standardized testing, internal assessments, and progress reports for student achievement.<br>• Staff satisfaction can be gauged through staff surveys, focus groups, and regular check-ins.<br>• Community engagement can be assessed through surveys, attendance at school events, and participation in parent-teacher conferences.<br>• Effectiveness of implemented strategies can be assessed through performance metrics and feedback. |
| **Meso**<br>**Co-teaching** | Degree of teacher collaboration<br>Availability and effectiveness of professional development opportunities<br>Sharing of best practices among staff | • Teacher collaboration can be evaluated through observation and surveys.<br>• Professional development opportunities can be assessed through participant feedback and observing changes in teaching practices post-training.<br>• Sharing of best practices can be tracked and measured via performance metrics and feedback. |
| **Micro**<br>**Effective Learning and Teaching Cycle** | Individual student performance<br>Student engagement<br>Classroom climate<br>Teacher effectiveness | • Individual student performance can be measured through assessments and grading.<br>• Student engagement can be gauged through participation metrics and surveys.<br>• Classroom climate can be evaluated through observation and student feedback.<br>• Teacher effectiveness can be measured through student performance, feedback, and observation. |

**Figure 5.1**: *Context of the School Improvement Ecosystem*

**Note: Figure 5.1** is an original analytical creation, designed to elucidate the intricate layers of context within the school improvement ecosystem, spanning the macro, meso, and micro levels. This diagram was conceptualised to visually communicate the critical environmental factors and system health indicators necessary for understanding and addressing the unique challenges and opportunities faced by Diocesan schools. The creation of this analytical tool was a key part of my research, allowing for a nuanced mapping and evaluation of the context-specific dynamics influencing school improvement processes. It emphasises the critical interplay between student achievement, staff effectiveness, and community engagement across the ecosystem's different levels, serving as an instrumental framework for my investigation into school improvement efforts.

Within the Diocesan data ecosystem, the system health indicators provided a more in-depth understanding of schools' performance, allowing the school and system leaders involved in the Strategy to provide targeted interventions and make ongoing adjustments to address identified areas of improvement. These indicators encompassed a range of factors that contributed to the schools' overall health, from academic achievement and student well-being to staff satisfaction and parental engagement. By closely monitoring these indicators using the data ecosystem, school and system leaders were able to develop and implement evidence-based strategies that enhanced the effectiveness of teaching practices in the rural, regional, and remote Diocese. Each of these components was critical to the success of the Strategy, and school and system leaders worked together to create a self-reinforcing cycle of improvement. The key point from these distinct yet interrelated indicators is that they were used to boost the energy that circulates for mutual benefits. This energy is formed from the gathering, utilisation and uninterrupted flow of information and knowledge fundamental to the smooth and productive functioning of the organisation (see Branson & Marra, 2021).

At the heart of the Strategy that was developed was a recognition that learning and teaching processes formed the cornerstone of school improvement; and that within the classroom, teachers and students working together was equally seen as essential. School and system leaders, therefore, prioritised these two key processes when crafting and executing the Strategy. The function of leadership at the macro level was critical in establishing the groundwork for effective pedagogy to prosper at both the meso and micro levels. This approach ensured that the Strategy was attuned to the genuine dynamics of the teaching and learning. As School leader #7 explained:

> … in our classroom, the culture we cultivate is far more potent than any curriculum we could plan. Just as Peter Drucker [a renowned management consultant and

> author, known for his emphasis on the importance of organisational culture] said, 'Culture eats strategy for breakfast.' We see every day how the environment we nurture among these four walls determines the success of our school improvement journey. (School leader, #7)

It must be noted that it is through these types of anecdotes that I have developed the school improvement ecosystem that tasks school and system leaders with understanding the interconnectedness of the macro, meso, and micro levels. The school improvement ecosystem emphasises the importance of aligning these layers to support and reinforce the shared beliefs and values inherent in the Strategy. By taking this strategy-focused approach, it has emerged through interviews that leaders were equipped to oversee and adjust school-specific improvement processes, ensuring that the school improvement ecosystem was consistently orientated towards enhancing learning outcomes and achieving sustained development. At the same time, by closely monitoring the various system health indicators, school and system leaders helped to identify areas requiring targeted intervention, and the Strategy was dynamically adjusted. This proactive approach enabled school and system leaders to continually improve and adapt their practices to meet the changing needs of their students, staff and community.

Importantly, distinguishing the three levels (micro, meso and macro) of the school improvement ecosystem and employing key metrics to assess their health allowed schools to develop an extremely nuanced understanding of their system's strengths and weaknesses. This tri-level approach supported the identification of areas requiring targeted intervention and facilitated the adaptation of strategies accordingly. Ultimately, this comprehensive methodology fostered an environment that promoted growth, development and success for all stakeholders involved in this particular school improvement Strategy. Moreover, considering the context in which each school operated was crucial for understanding the unique challenges and opportunities the school faced. By accounting for factors such as location, demographics and available resources, the school and system leaders could collaborate to develop targeted strategies that addressed their specific needs and maximised their effectiveness within their given context.

The tri-level approach to school improvement is encapsulated within the data ecosystem by the Performance Dashboard (see Figure 5.2), which provides a visual representation of key metrics such as literacy and numeracy rates, benchmark achievements, and attendance rates. This dashboard segments data into various core areas of school

performance, using coloured bars to indicate A-E grade distributions—where green represents the highest grades—and semi-circular gauges to show the percentage of students meeting early literacy and numeracy benchmarks, as well as overall attendance rates. Such a comprehensive view is critical as it identifies specific areas for targeted intervention, guiding school and system leaders on where to allocate resources and focus professional learning. Integrating the Performance Dashboard into the Strategy became a pivotal tool for monitoring progress, enabling data-informed decision-making at the macro (school leadership), meso (collaborative practices), and micro (classroom experiences) levels, thus aligning all aspects of the school environment towards the common goal of fostering literate and numerate students for a hope-filled future.

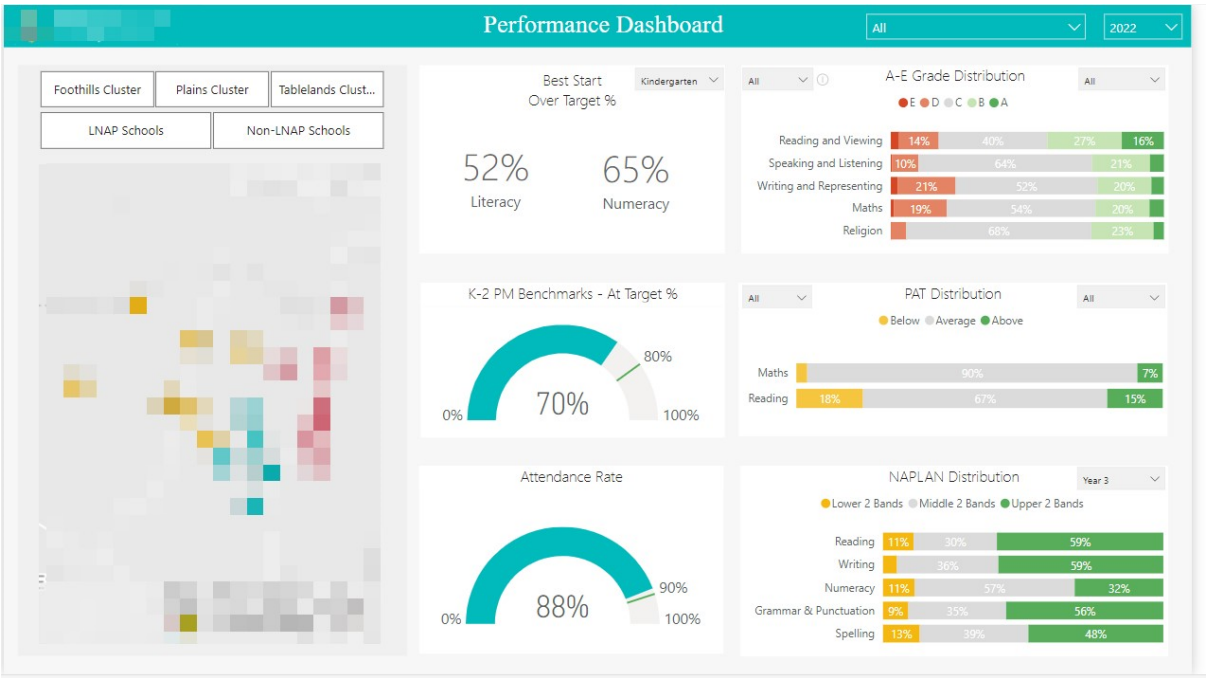



**Figure 5.2***: Performance Dashboard*

**Note: Figure 5.2** presents a direct visualisation from the data ecosystem's Performance Dashboard, showcasing literacy and numeracy rates, benchmark achievements, and attendance rates. This diagram is an exact representation from the data ecosystem used within the Diocese, illustrating the application of data-informed decision-making across the macro, meso, and micro levels of school improvement. Its integration reflects the strategic emphasis on monitoring progress and facilitating targeted interventions within the unique context of rural, regional, and remote schools.

In the context of a rural, regional and remote district that has undergone substantial school improvement over the last eight years, this comprehensive and interconnected approach was

especially crucial. Given the unique challenges faced by these schools, the ability to monitor and respond effectively to the health of the school improvement ecosystem at all levels was key to ongoing success. In sum, this comprehensive approach to understanding the health of the school improvement ecosystem, distinguished across the macro, meso, and micro levels, was integral to fostering an environment that promoted continuous growth and development in schools. The regular monitoring of key metrics across these levels allowed for the proactive identification and addressing of areas for improvement. It ensured the ongoing alignment of all aspects of the school environment with the overarching goal of providing the best possible education for students, thereby contributing to the sustained success and improvement of schools.

### 5.3 Strategic Advancements in Literacy and Instructional Leadership

The culmination of these efforts and experiences over the preceding years laid the groundwork for a strategic evolution. In 2018, the Diocese consolidated this evolving program by formally framing the Strategy with a focus on the main policy and implementation changes deemed necessary to make school improvement a reality. If we are to consider that these Strategy initiatives were ultimately aimed at consolidating the importance and practice of ongoing professional collaboration and learning, then this was done not only by creating appropriate roles and structures but also improving available meeting and planning time. This understanding is captured in a Director's e-bulletin entitled *Evidence based teaching* (Diocesan Office, 2018), which stated:

> Our experience has demonstrated the importance of providing time for professional collaboration and the importance of site based professional learning to build capacity. *The focus on system and school improvement has been on the teacher in the classroom, supported and challenged by competent leadership with the knowledge and skills to build teacher capacity*. The professional learning for school leadership teams supported by CSO personnel who could assist school leaders to implement a change in practice was critical to this classroom focussed work. (Diocesan Office, 2018; n.p.; emphasis added)

This level of dialogue also expanded to other forms of knowledge sharing, such as widespread use of the data to make further enhancements to the literacy block. To illustrate

this point, a principal expounded further on the importance of staff voice being a critical factor when implementing school improvement:

> *Staff voice is really important*. Always checking in with *staff*. Having an idea or a goal or a theme, but then talking about it with *staff* first to ensure that they're on board, that they understand, listening to *their voice*. [#7, school leader; emphasis added]

Arguably, without such a focus on that could ensure effective lines of communication, the ability of this school improvement Strategy to successfully bring about change would have been significantly impeded.

Indeed, one method for exploring this was the inclusion of staff voice whereby listening and knowledge sharing led to opportunities for dialogue and learning at AIP planning meetings. Furthermore, the increase in communication within the school indicated a shift in the principal's role, mirroring the change in school improvement strategies away from a traditional top-down approach and towards a more collaborative approach:

> There are some differences and that does affect your school: what that looks like? And how do you progress school improvement [in a rural, regional and remote Diocese]? You don't get huge turnover in staff, you really - school improvement is about capacity building of staff. It's not like, Oh well, if you don't like what I'm doing, leave, because there just isn't another Catholic high school to go to. So, it's pretty much working with everyone where they're at to build their capacity to go to the next step. So, that's what we've been doing for the past four years here at [School], and really working to change that culture and work around that. [#10, school leader]

The excerpts above describe how the changing Diocesan communication processes of focusing on system-wide communication and collaboration encouraged schools to pursue the school improvement agenda through building both a concept of systemness and the enabling condition of strong teams. Recognising the integral role of staff voice in school improvement, we see that the principles of communication and collaboration were fundamental in shaping the learning and teaching cycle that this study has put forth. This cycle, reflective of the shift towards 'systemness', is not just a framework but was a foundation for further school improvement.

### 5.4 Micro: Source: Using Data to Lead Learning

Within the Diocese, the transition to a more collaborative approach was pivotal. The learning and teaching cycle I have developed is a synthesis of best processes central to tackling the distinct challenges of educating students with varied learning needs and backgrounds. This cycle represents an integration of the most effective strategies and insights gathered from interviews and documentary analysis, forming a comprehensive model for instructional excellence. To demonstrate this point, the learning and teaching cycle is a dynamic and continuous process consisting of four key elements: *i)* using data to lead learning, *ii)* targeted teaching, *iii)* focused feedback and moderation processes, and *iv)* strong assessment. It is argued that these elements foster a responsive learning environment that enhances student engagement, motivation and academic success. In this section, I begin by examining the importance of using data to lead learning. Using data to lead learning involves gathering and analysing information from the data ecosystem to inform learning and teaching processes and tailor them to individual student's needs. Next, I discuss targeted teaching, a customised approach that adjusts learning and teaching processes based on each student's specific needs, as a crucial component of the learning and teaching cycle. Subsequently, I delve into focused feedback and moderation processes, which ensure effective communication between students and teachers, providing timely and specific feedback to maximise learning outcomes. Lastly, this discussion emphasises the role of strong assessment in evaluating student progress and adjusting learning and teaching accordingly.

The effective application of the learning and teaching cycle as intended by the Strategy was a significant factor in school improvement and enhancing student outcomes in the rural, regional, and remote Diocese. While the framework was not uniformly adopted across all schools, the categorisation of interview data and documentary analysis revealed common themes and practices that contributed to the overall success of the Strategy. Figure 5.3 illustrates the detailed, micro-level approach to this conceptual framework, highlighting the specific processes and categories derived from the interviews.

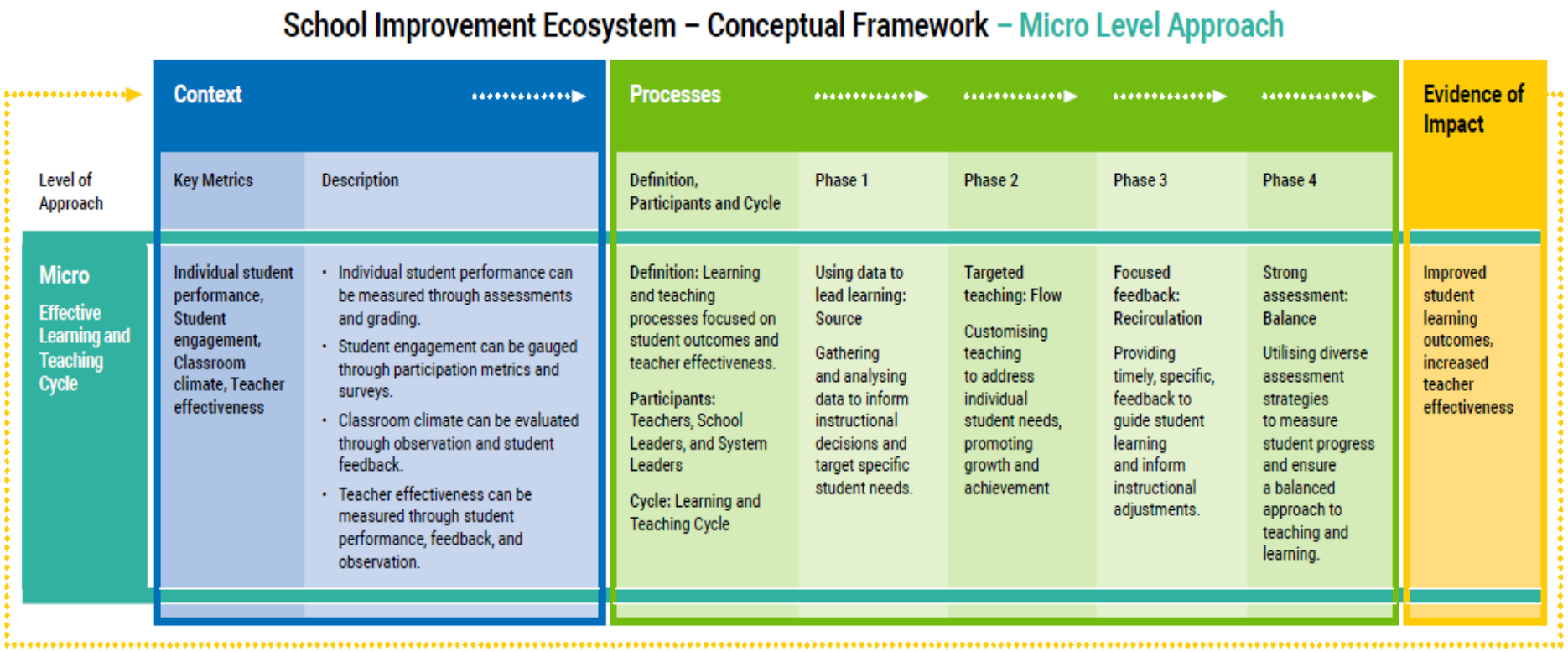



**Figure 5.3***: Micro Level Approach to the Conceptual Framework*

**Note on Figure 5.3:** Figure 5.3 is an analytical creation derived from the synthesis of interview data and documentary analysis. It visualises the micro-level implementation of the learning and teaching cycle within the Strategy, showcasing specific processes and categories identified as crucial for school improvement. This figure serves to highlight the varied but effective adaptations of the framework across schools in the Diocese, demonstrating the practical application of theoretical concepts in enhancing student outcomes. The illustration is intended to provide a clear, visual representation of the common themes and successful practices emerging from the data, facilitating a deeper understanding of the Strategy's impact at the classroom level.

Just as a water cycle begins with a water source to provide essential nourishment for life, using data to lead learning in the learning and teaching cycle starts with collecting relevant data for the data ecosystem. I therefore will also explore the crucial role of data collection and analysis in the learning and teaching cycle, drawing parallels to the water cycle to illustrate this process's interconnectedness and foundational nature.

The data ecosystem served as the lifeblood of the learning and teaching cycle, much like water sources play a vital role in the water cycle. This constant flow of data, akin to water flow through the water cycle, empowered teachers, school leaders and system leaders to refine their teaching strategies and maximise student engagement, motivation and academic success. As school leader #9 explains, "true educational leadership understands that grand visions are realised through small, deliberate actions—the classroom teaching embodies this truth". These comments align with Wallace (2016), who describes an effective learning cycle as one that informs teachers' practice. Collecting relevant data set the stage for the learning and teaching cycle, providing the foundation upon which teachers were able to build customised learning experiences, monitor student progress and foster a responsive learning environment that met the diverse needs of students in the Diocese. In the same way that water evaporates and later condenses as rain to nourish the Earth, so too did data collection and analysis help teachers identify areas of growth and potential improvement in their teaching methods. By carefully examining student performance data, teachers could then pinpoint specific areas in which students needed additional support or intervention, which allowed them to develop targeted strategies for each student's unique learning needs. As Goffin, Janssen, and Vanhoof (2022) emphasise, educational professionals must "fully exploit *all information sources* [i.e., data] available to them to shape their policy and practice" (p. 456).

The cyclical nature of the water cycle is similarly mirrored in the iterative process of using data to inform teaching and learning. Just as the water cycle constantly replenishes and nourishes the environment, the data ecosystem provides ongoing feedback and insights that enables teachers to adapt their learning and teaching processes and meet the ever-changing needs of their students. According to Millman, in a chapter of Madden's (2022) book, school and system leaders enhance student success by making data-informed decisions, which are facilitated by regular monitoring of student progress and evaluation of instructional effectiveness. As school leader #7 described, the collection, use of and reflection upon data were ongoing reiterative practices as part of this wider ecosystem.

> … I'm a firm believer in the bedrock of using data when it comes to our learning cycles. It's where our strategies come alive and where effective teaching begins. And it doesn't stop at using data, because it is in the classroom where we see those plans in action, where collaboration really takes flight. It's all a cycle, isn't it? Without that strong foundation in both planning and teaching, we simply can't achieve the learning outcomes we're aiming for. (#7, school leader)

It is therefore clear that data played multiple roles: sometimes they were output, but they were equally an input for subsequent teaching and leadership practices. As Hallinger and Lu (2014) argue, "leadership effects on student learning are achieved through shaping organisational structures, processes, and culture of the school" (p. 483). This analysis supports the notion that the learning and teaching cycle is enhanced by strong leadership and school improvement, and that embracing data-informed decision-making processes are central to these endeavours.

Moreover, the data ecosystem fostered a culture of continuous improvement within the schools and their Diocese. As Meyers and Van Gronigen (2019) state, school improvement requires "thoughtful consideration and understanding of the levers that need to be pulled to realise improvements, such as organisational structures, climate or culture, instructional practices, or data use" (p. 270). By regularly collecting and analysing data, the teachers identified areas where they needed to enhance their teaching practices, seek professional development opportunities, and collaborate with colleagues to share ideas and resources. Andrews, Beynon, and Genc (2017) similarly argue that in the public sector, such as education, there is a growing trend towards embracing a project management culture led by government service delivery models, with the tripartite notions of *equity*, *efficiency* and *effectiveness*. This shift underscores the importance of using data to lead learning and create a more equitable and efficient learning environment. Key metrics at the micro level include individual student performance, student engagement, classroom climate and teacher effectiveness. Individual student performance offered insights into the efficacy of teaching strategies and the potential areas of improvement; whereas student engagement measured the involvement of students in the learning process, indicating the effectiveness of teaching methodologies in retaining student interest. Classroom climate reflected the atmosphere and social dynamics within the effective learning cycle. Finally, teacher effectiveness provided a direct measure of the quality of learning and teaching and its impact on student learning outcomes.

An example of best practice in collecting student voice, which significantly informs teaching strategies and contributes to school improvement, is exemplified by a survey conducted by one of the system leaders. This survey, called the *Effective Learning Survey* (2020), effectively captured the essence of student engagement and learning success as perceived by the students themselves. It served as a model for how direct feedback from students can guide teachers in refining their practices and better aligning their instructional approaches with the students' needs. The survey asked students to reflect on various aspects of their learning experience, such as their understanding of learning targets, the quality of instruction, the feedback received, and their own performance. By collecting student perspectives on what they require more or less from their peers, teachers, and themselves, the survey provides rich, actionable data. This feedback mechanism aligns with the principles outlined by Meyers and Van Gronigen (2019), as well as Andrews, Beynon, and Genc (2017), who advocate for the use of data to drive learning and create a culture of continuous improvement. In the context of this study, such a survey is invaluable for several reasons. Firstly, it directly measures key micro-level metrics like student engagement and classroom climate, which are crucial indicators of the effective learning cycle. Secondly, it allows for the collection of data on teacher effectiveness from the student perspective, which is often difficult to gauge through other means. Lastly, and perhaps most importantly, it empowers students by giving them a voice in their educational journey, fostering a sense of agency and partnership in the learning process.

To further demonstrate the point that using a data ecosystem had a transformative impact on teaching and learning cycles, I observed how data was leveraged to personalise instruction and bolster student achievement. By collecting and analysing data, the teachers could better understand their student's needs and develop personalised teaching strategies that improved student outcomes. Embracing a data-driven approach also fostered a culture of continuous improvement, enabling teachers, school leaders and system leaders to identify areas for enhancement in their own teaching and leadership practices and seek professional development opportunities to further their skills and knowledge. The success of the school improvement Strategy demonstrated the power of a data ecosystem in improving teaching and learning, fostering a culture of continuous improvement, and ultimately enhancing students' educational experiences. Much like the water cycle's essential role in sustaining life, the teachers, school leaders and system leaders who harnessed the power of data were able to create dynamic, responsive and effective learning environments that met the diverse needs of their students. Indeed, a policy initiative from the Diocese, designed to bolster data

literacy skills, was designed to “sharpen teachers’ use of assessment data to drive precise instruction” (Diocesan Office, 2020, p. 39). This commitment to data literacy and establishing a data ecosystem ensured that the teachers and leaders were equipped with the necessary skills and tools to make informed decisions about their teaching practices and the support systems in place for student success.

Indeed, the Effective Learning and Teaching Cycle encapsulated a holistic and progressive approach to teaching and learning. More than a theoretical construct, the Effective Learning and Teaching Cycle is an analytical framework that synthesises best practices derived from empirical data, enabling a deeper understanding of the educational landscape and informing targeted strategies for school improvement. The parts of the cycle sequentially transition from teacher-directed ‘Targeted Teaching’ sessions to guided student engagement, culminating in a demonstrative ‘Strong Assessment’. Intertwined within this stage is the mechanism for ‘Focused Feedback’, ensuring timely insights and evaluations from diverse stakeholders. The ‘Focused Feedback’ layer embodies the spirit of continuous improvement, providing students an opportunity to revisit and refine their understanding. Overarching instructional aims of this model champion a shift from traditional teaching methods. It calls for a reduced teacher-centric approach in favour of more coaching, encourages active student participation over passive instruction, and emphasises the classroom’s role as the epicentre for all pedagogical activities. Additionally, it promotes purpose-driven assessments, underlining the significance of self and peer evaluations, and challenging conventional norms that measure and equate student output solely with teacher input. This model therefore serves as a beacon for modern pedagogical practices. It advocates for a more engaged, collaborative and reflective learning environment, ensuring a comprehensive understanding and holistic conceptualisation of student development.

At a school level, there was autonomy to be able to design these effective learning teaching cycles. Building on the foundational learning and teaching cycle of the Strategy, the integration of a school-specific pedagogical model can enhance its effectiveness. This example of a best practice approach, as illustrated in Figure 5.4, tailors the cycle to include the school’s distinctive educational methods, aligning with both the Diocesan directives and the school’s individual context for effective teaching and learning.

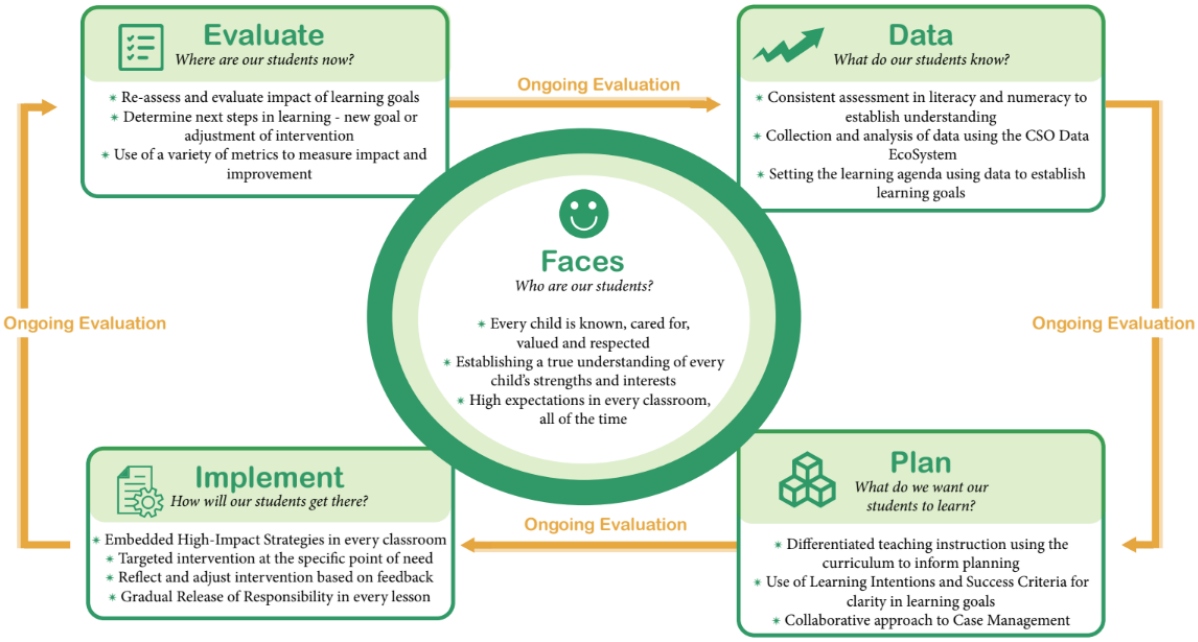



**Figure 5.4:** *[School name] Teaching and Learning Cycle*

**Notes: Figure 5.4** is an illustrative representation of a school-specific teaching and learning cycle developed within the Diocese. This figure exemplifies how individual schools tailored the Strategy's foundational framework to their unique contexts, integrating distinct educational methodologies. It showcases the school's autonomy in adapting and enhancing the learning and teaching cycle to fit its specific pedagogical needs, thereby aligning with Diocesan objectives while addressing local educational challenges.

Furthermore, through this interconnected process, much like the water cycle, the collection, analysis, and application of data in the learning and teaching cycle were essential components that worked together to create a thriving educational ecosystem. By embracing this data-driven approach, teachers, school leaders and system leaders fostered continuous improvement, creating a more equitable and effective learning environment for all students.

### 5.5 Micro: Flow: Targeted Teaching in Rural, Regional, and Remote Diocese

Delivering effective teaching and learning to students with diverse learning needs and backgrounds posed significant challenges, which the Diocese sought to address through *targeted teaching*. This approach adjusted learning and teaching processes to meet individual student's specific needs (Sheridan, 2022). Indeed, one of Hopkins's (2022) central premises is that by "rebalancing 'top-down' and 'bottom-up' change, the system can enhance the life chances of increasing numbers of their students." (p. 26). Moreover, targeted teaching fostered a learning environment responsive to all students' diverse needs and abilities, increasing engagement, motivation and academic achievement.

A vital component of targeted teaching was the literacy block, which allocated dedicated time for teachers to develop their students' literacy skills through explicit teaching, modelling, and guided practice, reflecting the flow and interconnectedness of the water cycle. Holzberger and Schiepe-Tiska (2021) have highlighted the multiple perspectives on school improvement, which aim to affect the school context and associated processes, particularly regarding improving instructional quality. During the literacy block, teachers employed various targeted teaching strategies, such as differentiated and small group instruction, to accommodate their students' diverse needs. Teachers ensured that students received explicit teaching in foundational reading and writing skills, including phonemic awareness, phonics, fluency, vocabulary, and comprehension strategies, and the literacy block afforded students time to practice their reading and writing skills. For instance, during independent reading and writing, students applied the skills they learned during explicit teaching, and teachers could offer feedback and support as needed. Furthermore, the literacy block could target individuals or groups of students' phonological, fluency, retelling and comprehension skills, instilling confidence, and self-efficacy in students.

The literacy block also promoted community and collaboration within the classroom, much like the interconnected stages of the water cycle. Through activities such as guided reading and writing workshops, students were encouraged to work together and support each other's learning. These activities helped develop students' literacy skills, as well as yielding positive social and emotional benefits. The literacy block thus served as an effective means of assessing student progress and adjusting learning and teaching, accordingly, reflecting the water cycle's ever-flowing and adapting nature. Standen (2010) has discussed the implementation of the literacy block and how assessment informs school improvement, and suggests that by employing various assessment tools, such as running records and student conferences, teachers can identify students' strengths and weaknesses to tailor teaching to address their specific needs. The literacy block strategy was similarly identified by participants as a crucial component of targeted teaching in the Diocese, much like the water cycle's continuous flow in the natural world. Teachers created a supportive learning environment that encouraged student engagement, motivation, and academic achievement by customising learning and teaching processes to individual student's needs and employing diverse instructional strategies. In educational discourse, particularly within research that scrutinises instructional methods, the uninterrupted literacy block is seen as a pivotal strategy in enhancing student literacy (Sharratt, 2008). This would suggest that the system of schools

subscribing to this approach can attain clear gains in pedagogical effectiveness and, in turn, student learning achievements.

Importantly, the literacy block was not merely an isolated practice but was rather part of a comprehensive, systemic approach that includes the establishment of a coherent instructional framework, continuous professional development, and a rigorous cycle of planning, teaching, and evaluating to ensure the fidelity of literacy instruction. The uninterrupted literacy block, conceived as a 90 minute block of time devoted to literacy, was underpinned by an array of strategic practices. The meticulous use of data to inform instruction was a cornerstone of this framework. Internal assessments such as reading and phonics diagnostic assessments, and external validators such as PAT and NAPLAN, were housed within the Data Ecosystem, providing teachers with actionable insights into student performance. This system subscribed to the maxim "No Data, No Discussion, No Decision" (school leader, #7), which underscores the primacy of empirical evidence in guiding teaching and learning within the Diocese.

### *5.5.1 The Uninterrupted Literacy Block: A Structured Approach to Literacy Development*

The initiation of the literacy block set the stage for active learning, resonating with the philosophy that a well-defined beginning was essential for successful educational outcomes. Within this framework, the teacher introduced the day's literacy activities, explicitly outlining learning intentions and success criteria, a technique proven to enhance student understanding and performance (Sharrat, 2008). This included the implementation and financial resourcing of a daily literacy block (see Figure 5.5) within each school's lesson timetable, thus ensuring that there were 90 minutes of literacy and sustained writing and reading each day.

# Whole School Agreed Literacy Block

[SUGGESTED]

| Timing | Students | Description |
|---|---|---|
| 5 minutes | Whole Class | **Session Introduction/Setting the Scene**<br>• Introduce the literacy activities for the day<br>• Identify and articulate the Learning Intentions and Success Criteria for each task (*these must be reinforced at the beginning of each phase of the sequence)*<br>• Review previous work/learning<br>• Build on prior knowledge |
| 5 minutes | Whole Class | **Modelled Reading - Teacher does, students watch** *(Read On pg 27)*<br>• One reading strategy focus per session<br>• Use think alouds<br>• Conduct multiple sessions with the same focus using a variety of texts |
| 15 minutes | Whole Class | **Shared Reading - Teacher does, students help** *(Read On pg 31)*<br>• Modelled reading with explicit, specific discussion<br>• One focus per day (e.g. word identification strategy, comprehension strategy, spelling/punctuation/grammar focus, literature concept)<br>• Use an enlarged text (the text must be visible to all students at all times e.g. hovercam onto board, use of big books) |
| 40 mins (2 x 20 minute sessions) | Small Groups - Ability based groupings | **Reading Workshop**<br>**Guided Reading - Students do, teacher helps** *(Read On pg 37)*<br>• 2 groups per day with teacher (not TA/helper)<br>• Provide scaffolds and support to a small group of students with a similar need as they read a common text<br>• Highest needs groups need repetition - more than 1 session per week<br>• Text is at the group's average instructional level<br>• 4 - 6 students per group. Each student has own copy of the text.<br>• Specific learning goals for each group based on data from the Literacy Progressions/ Literacy Continuum (may be tracked on class data wall)<br>• Pose guiding question, listen to individual students read quietly as others read silently<br>• Informal running records on **seen** texts (**unseen** = no orientation, no reading of text completed, **seen** = students have participated in the book orientation, but have not read the text, **familiar** = text has been read at least once)<br>**Reading and Viewing Activities - Students do, adults watch** *(Read On pg 53)*<br>• Students work in their small groups or individually on **purposeful** tasks<br>• Opportunities are provided for students to share their work<br>• Use students' work to assess reading development<br>• May include sound, punctuation, grammar focus<br>• Must include **independent** reading each week which concludes with sharing |

## Whole School Agreed Literacy Block (cont.)

| | | | |
|---|---|---|---|
| 15 minutes | Whole Class OR Small Groups - Ability based groupings | **Spelling (word study)**<br>• Specific focus<br>• Activities may include: pre/post testing, segmenting/blending, word sorts, dictation, read and spell, word wall/vocabulary, partner testing | **Handwriting**<br>• Systematic and sequential teaching of correct letter formation; modelling and practice |
| 5 minutes | Whole Class | **Modelled Writing - Teacher does, students watch** **TEACH**<br>*(Write On pg 73)*<br>• Teacher models think alouds to demonstrate how a writer constructs a text (or part of a text)<br>• Focus on structure, type of text, purpose, grammar, punctuation, spelling, word choices, language, spelling or literacy concept | |
| 10 minutes | Whole Class | **Shared Writing/Joint Construction - Teacher does, students help** **TALK**<br>*(Write On pg 77)*<br>• Students learn about the process of writing as they plan and write together with the support of their teacher<br>• Used a shared experience/stimulus as a basis for jointly creating a text (or part of a text)<br>• Throughout the week proofread, refine, edit and add to the text before publishing and using as an example of "successful" writing as a scaffold for students (link to learning intention and success criteria for writing) | |
| 20 mins (2 x 10 minute sessions) | Small Groups - Ability based groupings | **Writing Workshop**<br>**TASK** | |
| | | **Guided Writing - Students do, teacher helps** *(Write On pg 81-83 +87)*<br>• 2 groups per day with teacher (not TA/helper)<br>• Students plan and write texts with careful teacher scaffolding<br>• Students grouped according to teacher identified need (Literacy Continuum, or other data)<br>• Students construct discuss, share and edit their work or that of the group<br>• Students receive and provide success specific feedback | **Writing and Representing Activities - Students do, adults watch**<br>• Students work in their small groups or individually<br>• Students construct/edit/publish their own text<br>• Students bring these texts to their guided writing sessions |
| 5 minutes | Whole Class | **Learning Circle (Plenary)**<br>• Ask/discuss the 5 Learning Questions<br>• Students and teachers share successes<br>• Set future goals | **The 5 Learning Questions:**<br>What are you learning?<br>How do you know?<br>How are you going?<br>How can you improve?<br>Where do you go for help? |
| **Time: 1:50 pm – 2:00 pm** | | | |
| 10-15 minutes | Whole class | **Reading to Students** *(Read On pg 25)*<br>• Not in the literacy block<br>• Read a text aloud to students<br>• Choose quality literature<br>• Focus on enjoyment and appreciation of reading | |

**Figure 5.5**: *Whole School Agreed Literacy Block*

**Figure 5.5** depicts a standardised literacy block framework adopted across the Diocese as part of the Strategy. This visual artifact, derived from the system-level educational directives, illustrates the structured daily schedule dedicated to literacy activities within the schools.

Additionally, this literacy block included modelled teaching, shared teaching, whole class and small group sharing, and literacy activities. The inclusion of the concept of instructional leadership in the implementation of the literacy block was also considered essential, as highlighted by the following participant:

> Look at the way that the teaching is happening in the literacy blocks in the other schools, and also increase the role of – which has been my fanfare for years is [that] the principal has to be an *instructional leader*. *The members of the leadership team have to be instructional leaders*. [#9, system leader; emphasis added]

These staffing initiatives were complemented by AUD$2.5 million in additional unallocated staffing that enabled principals to release teachers to collaborate in CPLC outside of the standard work practices agreement. This additional staffing funds helped schools to demonstrate goodwill by showing teachers just how much their contribution to the Strategy's implementation was being (financially) valued. Two school leaders particularly noted the importance of this approach:

> The literacy block is not just a segment of our day; *it's the cornerstone of building critical thinkers*. It's where we don't just teach students to read and write, but to connect and reflect, turning literacy into a springboard for all learning. (School leader #10; emphasis added)

> Our strategic response to diverse educational needs is the promotion of the *literacy block*. It's where we use data to inform teaching. This process translates into tangible gains in reading and writing for every student. *These tangible gains are our evidence of impact*. (School leader #9; emphasis added)

In the modelled reading phase, the teacher demonstrated reading strategies, adopting the 'think aloud' approach to foster metacognitive skills among students. By verbalising their thought process, the teacher models cognitive strategies explicitly, which was a pivotal step

in the sequence that enabled students to internalise the reading process. This method aligns with evidence-based practices that suggest modelling as an effective way of teaching new skills (Villa, Thousand, & Nevin, 2013; Zhou, Chen, & Chen, 2019).

The literacy block also extended its focus on rich literature. Here, students were not passive recipients but active participants in the learning process. The teacher led the discussion while students contributed, fostering a collaborative learning environment. This shared interaction was a practical application of literacy development, highlighting the importance of social interaction in cognitive development (Schechter & Ganon, 2012; Singer & Moscovici, 2008; Taylor, Joshi, & Wright, 2015). At the same time, the reading workshops and guided reading sessions represented the epitome of differentiated instruction. Here, students were divided into small, ability-based groups in which they engaged with texts at their respective instructional level. The teacher supported each group, providing scaffolds for those who need it, while higher-need groups receive additional repetition to ensure mastery—a principle grounded in the Response to Intervention model found in the *Living Well, Learning Well Framework* (Diocesan Office, 2020). As students worked independently or in groups, they delved into reading and viewing activities, providing an opportunity for teachers to assess reading development in the classroom setting. This phase values the principle of independent practice, where students applied the skills learned in an environment whereby the conditions are ripe for success. The diverse activities, including phonics, punctuation, and grammar focus, ensured that different facets of literacy are honed.

In writing sessions, the teacher once again takes a leading role in the modelled writing segment, demonstrating the construction of a text while articulating their thinking process. This 'thinking aloud' strategy during writing echoes the reading sessions, maintaining consistency in teaching methods across the literacy block. As one school leader reported,

> The children enjoy it. The children feel safe and most importantly they can learn the craft of writing. That is because the literacy block offers a safe setting where the teacher can provide scaffolding for small groups. The children experience targeted feedback and individual attention for their writing. We can see the improvements (school leader, #7)

The literacy block then concluded with a plenary session where students and teachers discussed what was learned, employing a reflective approach that was critical for consolidating learning. During this learning circle, five questions were asked of the students:

These questions were: "What are you learning?" "How are you doing?" "How do you know?" "How can you improve?" and "Where do you go for help?" (Sharratt, 2008). These self-reflective questions were instrumental in encouraging students to articulate their learning process, assess their understanding, and identify areas for improvement, leading to goal setting for future sessions. This analysis of the uninterrupted literacy block, as observed in the Dioceses' framework, highlights the methodical and research-backed structure of literacy education. Each component—from explicit instruction to independent work and assessment—is interwoven to create a comprehensive approach to literacy development. It is worth noting that this analysis is situated within a much larger conversation about effective literacy strategies, and it thus contributes further to the body of knowledge with practical, classroom-tested methodologies (Cox, 2022).

The *Gradual Release of Responsibility* (GRR) model is seamlessly integrated into the literacy block, ensuring a structured transition from teacher-led instruction to student-centred learning (Pearson & Gallagher, 1983). This shift reflects a deep understanding of cognitive apprenticeship, where teachers gradually scaffold student learning, enabling students to undertake complex tasks independently. The GRR model based on the the seminal work of Pearson and Gallagher's (1983) work, delineated a clear trajectory for literacy instruction: from direct modelling ("I do"), to shared experiences ("We do"), to guided practice ("You do it together"), and finally to independent application ("You do"). Furthermore, visual aids played a vital role in this pedagogical framework. They provided clear guidelines for the structure of the literacy block, delineating the distinct roles and responsibilities of teachers and students within each component. These visual cues, along with goal-setting templates for reading and writing, served as daily reminders of the Diocese's instructional objectives, reinforcing its standards for literacy instruction and offering tangible benchmarks for student success. In addition, timing was a critical factor in the literacy block. The system adopted a disciplined approach to scheduling, ensuring that each literacy component is allocated adequate time for the fullest impact. This time allocation was depicted in visual timetables, which not only enhanced the predictability of instructional routines but also served as a pedagogical tool that guides the pacing and flow of literacy instruction.

Moreover, the success of the literacy block hinged on a multifaceted view of literacy that recognised reading and writing as interdependent processes. To this end, the system emphasised the necessity of explicit learning intentions and success criteria. 'I statements' and 'Think Alouds' are employed as metacognitive strategies to model thought processes during reading and writing tasks, which enabled students to engage actively and independently in

their literacy development. Following on from this, the integration of data into CPLCs further exemplified the system's commitment to evidence-based instruction (Millman, 2022). CPLCs were structured around the analysis of student data, driving the case management of individual students or groups, and informing the allocation of resources for interventions as needed. This approach, underpinned by the mantra of 'putting faces on the data', personalised learning and helped ensure that every student's educational pathway was understood and supported.

### *5.5.2 Approaches to Literacy Placemat*

Understanding the system's educational philosophy requires a thorough examination of the *Approaches to Literacy Placemat* (Figure 5.6), which provides educators with a foundational overview of the literacy approaches valued within the educational system. The consistent use of a single-page resource, the literacy placemat, demonstrated the Diocese's intent to focus on improvement. This tool aided in inducting new staff across multiple roles—teachers, school leaders and system leaders—into a culture of sustained pedagogical excellence.

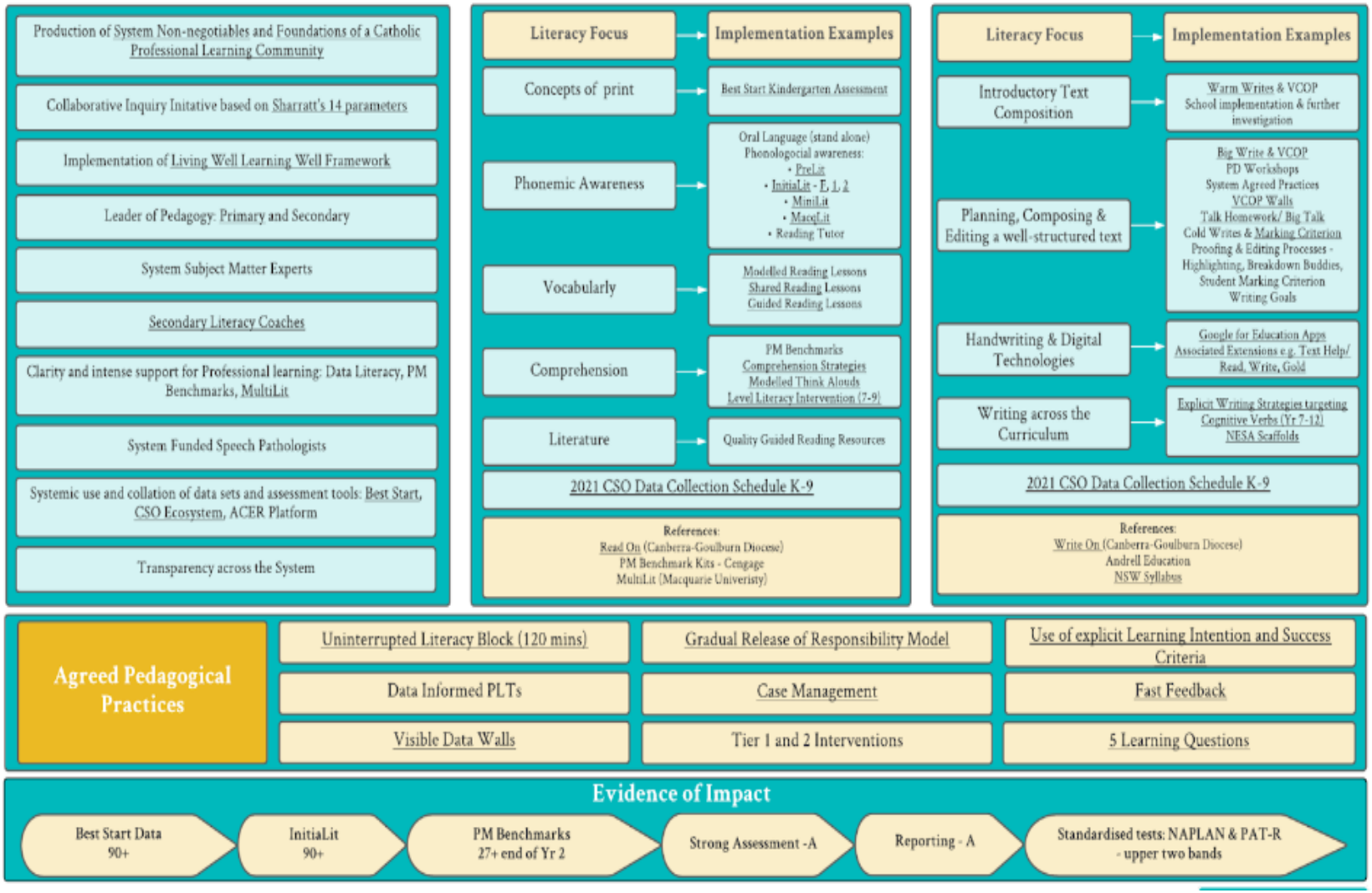



**Figure 5.6***: Approaches to Literacy Placemat*

**Note on Figure 5.6:** A system artifact designed to standardise literacy teaching strategies across the Diocese, encapsulating key literacy practices for educators.

The precise focus at a classroom level embodied the collaborative spirit that propelled literacy advancement within the system. By fostering dialogue and shared understanding among educators, this precision focus contributed significantly to the development of a unified instructional language that aligned with agreed pedagogical practices. These practices, detailed in the *Approaches to Literacy* placemat, were not static; rather, they evolved through continuous professional learning over the years that drew on the expertise of educational researchers such as Dr. Lynn Sharratt, who was employed by the Diocese as an educational consultant. Dr. Sharrat's expertise and guidance was seen as instrumental for refining the approaches to teaching reading and writing within the system. The seamless incorporation of uninterrupted literacy blocks within the schools thus represents a strategic alignment of evidence-based pedagogy. The commitment to a structured instructional cycle, the systematic use of data to inform practice, and the cultivation of robust CPLCs highlight the transformative impact of such an approach on student literacy outcomes (Madden, 2022). As the Strategy evolved, it continued to advocate for these well-defined literacy practices, ensuring that every educator was empowered to contribute effectively to the collective goal of literacy improvement, and that every student was equipped with the skills necessary to thrive in an increasingly literacy-dependent world.

### 5.6 Micro: Recirculation: Focused Feedback

Like the water cycle, the learning and teaching cycle is a constantly repeating process. I propose that providing focused feedback is comparable to the recirculation stage, where water returns to the environment to begin the cycle again. With this analogy in mind, I examined how the concept of recirculation could be applied to the learning and teaching cycle in the Diocese. Recirculation in the form of focused feedback was essential to ensure that the learning and teaching cycle remained ongoing and responsive to each learner's needs, despite the geographical distances between schools. Furthermore, just as water recirculates in the environment, constructive and tailored communication helped maintain the continuous cycle of learning and teaching. Establishing moderation processes that ensured culturally appropriate and sensitive communication was vital to address the system's needs. To this effect, Varanasi (2002) has argued that school systems "also exhibit functionality and modularity; demonstrate relationships and interactions; provide internal and external communications; acquire intelligence; develop adaptive control and feedback; and establish decision-making processes" (p. 64).

Bowers and Krumm (2021) contend that school improvement should be broken into processes, whereby "information flows through feedback loops to inform decisions, creating a continuous cycle" (p. 631). By utilising various assessment tools and strategies, teachers gathered evidence of student learning and offered feedback to the students. Addressing teachers' unique challenges in these settings was essential to keep the learning and teaching cycle in motion. Tichnor-Wagner and colleagues (2017) state that continuous improvement "focuses on characterising the situation in all its complexity and uses an iterative, flexible process wherein design and research plans are revised as the work progresses" (p. 467). Visualised student performance data thus stood as the cornerstone in the context of data-driven educational processes. Transcending mere numbers, these visual representations distilled complex student performance metrics into digestible insights that could readily influence instructional strategies. The PM Benchmark page (Figure 5.7), for instance, offered a snapshot of where students are currently achieving regarding their reading abilities. With a glance, teachers described how they could discern how many students were excelling and how many might need targeted support. This immediacy of understanding helped drive timely interventions, such as the introduction of tailored reading programs (*Tier 2* and *Tier 3* interventions) for those in the 'Developing' bracket.

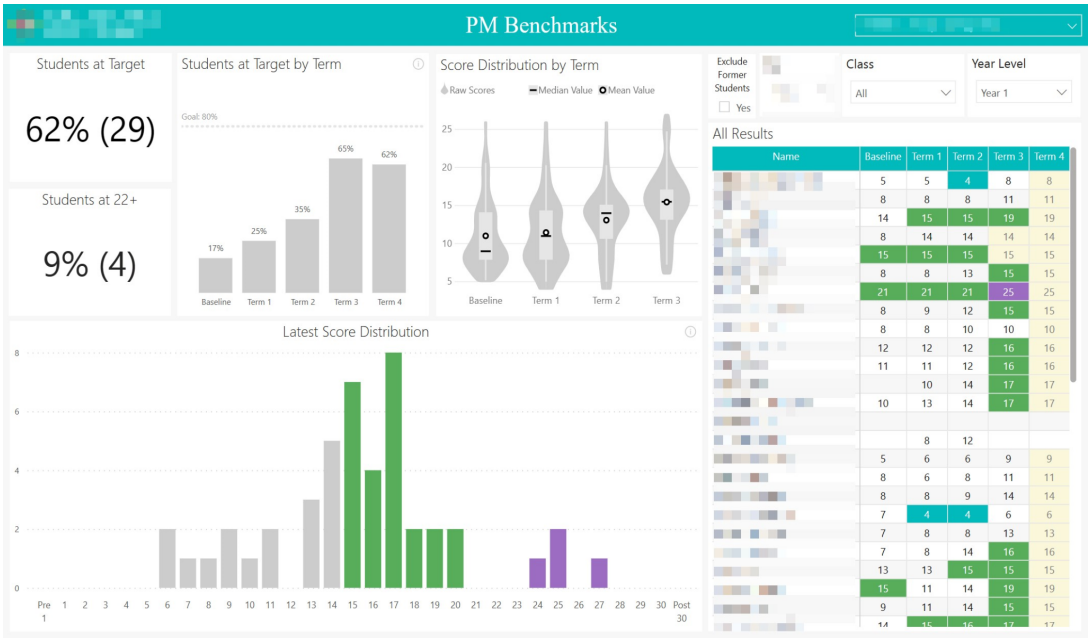



**Figure 5.7**: *The PM Benchmark Page*

**Note on Figure 5.7:** This is a snip from the data ecosystem, serving as a tool for teachers to assess reading proficiency levels across their classrooms. It reflects the system's effort to visualise student achievements and needs, facilitating targeted instructional strategies.

Similarly, the PM Benchmark page served a dual purpose. On one hand, it tracked the collective class and individual student progress over time, spotlighting any unexpected fluctuations in performance across terms. Such insights prompted teachers and school leaders to recalibrate their teaching methods and revisit specific curriculum components. On the other hand, the diversity in student abilities becomes palpable, fostering an appreciation of the need for differentiated instruction, and the A-E Progress Reports visualisation (see Figure 5.8) further deepened this understanding. By mapping students across an Australian government standardised grading scale, teachers could quickly identify overarching trends and outliers in the core subjects of English and Mathematics. This knowledge not only aided when refining lesson plans for a class but also, importantly, when it came to creating personalised learning experiences. For example, students who are high performers and those students who need support, such as those securing A or E grades, respectively, benefited from such bespoke instructional techniques.

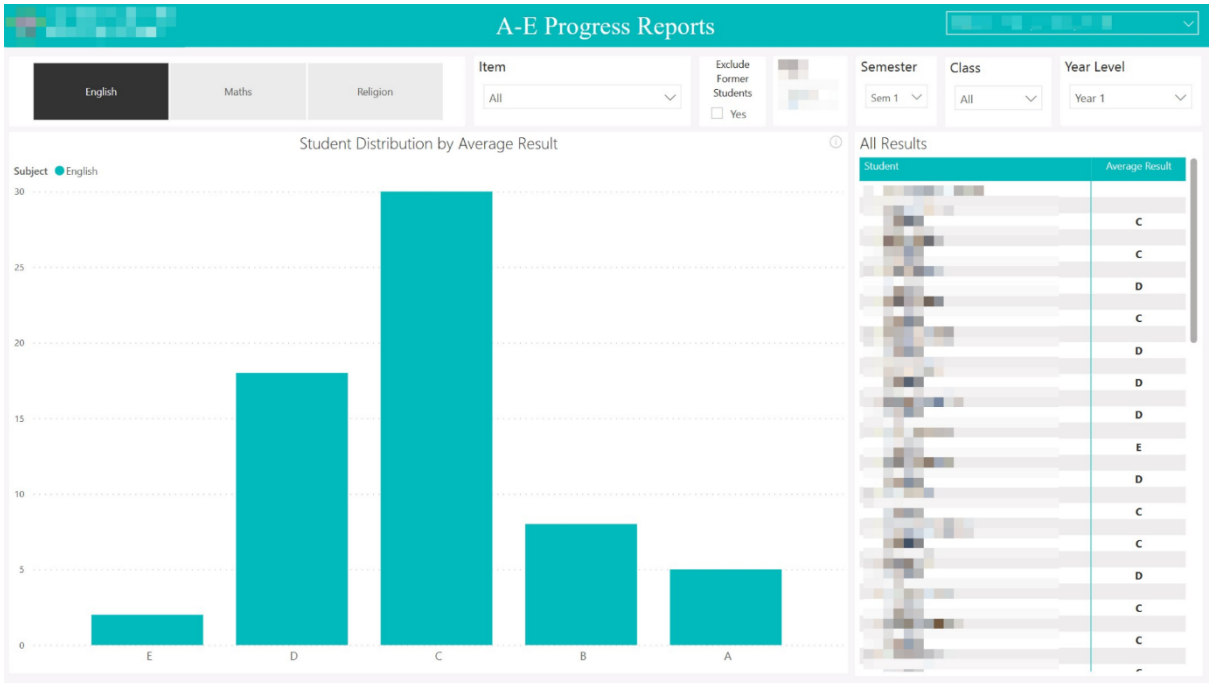



**Figure 5.8***: A-E Progress Reports*

**Notes: Figure 5.8**, ‘A-E Progress Reports’, is a snip from the data ecosystem designed to showcase student performance across standardised grading scales. This visualisation aids in identifying trends and individual needs, guiding personalised learning paths and teaching adjustments.

These graphs also served as tangible feedback mechanisms. They provided a foundation for constructive dialogue between teachers, schools leaders and system leaders, encouraging goal-setting and collaborative problem-solving. The cyclical process of reviewing, reflecting, and revising based on visual data ensured that the classroom remains a dynamic and responsive space. In essence, while these graphs capture past and present student performance, their true power lies in shaping future instructional trajectories, ensuring education remains ever attuned to learners' evolving needs.

As a part of the Strategy, moderation processes were particularly important, ensuring teachers received the guidance and resources required to deliver effective feedback. This process involved setting clear expectations for feedback, offering professional learning on effective feedback techniques, and fostering a supportive culture of collaboration and continuous learning. Effective communication and feedback were vital for creating a supportive and productive learning environment in the rural, regional, and remote Diocese. By providing clear guidance on effective communication and feedback techniques, and tailoring feedback to each learner’s unique needs, the teachers helped all students to succeed and maintained the continuous flow of the learning and teaching cycle. Moreover, effective communication and feedback, like recirculation in the water cycle, promoted trust and collaboration among all stakeholders in the education community, including students, teachers, school leaders and system leaders. This collaborative approach helped identify areas of strength and weakness, fostering a shared understanding of each student’s progress. By working together, these stakeholders ensured that all students were supported, and their unique needs were considered.

In conclusion, effective communication and feedback served as the recirculation component of the learning and teaching cycle in the rural, regional, and remote Diocese. Moderation processes and focused feedback ensured that students received timely and specific feedback tailored to their needs, keeping the cycle in constant motion. By equipping teachers, school leaders and system leaders with the guidance and resources needed to provide effective feedback, all students had the opportunity to reach their full potential. Effective communication and feedback also fostered trust and collaboration among all stakeholders, resulting in a shared understanding of each learner’s progress. By incorporating

the concept of recirculation into the learning and teaching cycle through focused feedback, teachers, school leaders and system leaders created a supportive and productive learning environment, thereby ensuring that all students had the opportunity to succeed and reach their full potential.

### 5.7 Micro: Balance: Strong Assessment

Similar to how the water cycle maintains balance in the Earth's ecosystems, strong assessment practices contributed to the balance in teaching and learning. This balance was particularly crucial in the rural, regional, or remote Diocese, which often needed more resources and faced limited professional development opportunities due to geographical isolation. As Håkansson and Adolfsson (2022) suggest, schools and systems must work together to reorient the organisation and enact shared beliefs and understandings to influence learning, teaching, and well-being outcomes.

Critical components of strong assessment practices include establishing clear assessment goals and objectives and collaborating to identify the desired learning outcomes for each subject area. Hopkins and colleagues (2014) have emphasised the various projects, interventions and innovations across countries that focus on creating effective student learning environments. Aligning assessments with these goals ensured a relevance and usefulness to *all* students while, at the same time, developing various assessment tools and strategies tailored to each learner's unique needs. Teachers were creative in their assessment approaches, utilising various methods such as formative and summative assessments, performance-based assessments and technology-based assessments. As school leader #9 reflected, "by integrating teacher judgement with empirical data, we navigate each student's unique pathway, ensuring that our pedagogy is as individualised as the learners in our care". Ongoing professional learning was thus deemed necessary for strong assessment practices, especially for the teachers in the most remote areas who often had access to limited professional learning opportunities. Oski (2010) has emphasised school improvement through a comprehensive change process, focusing on improving learning, teaching, and well-being outcomes. Consequently, regular professional learning and support were provided to the teachers, school leaders and system leaders for guidance on designing and implementing effective assessments, interpreting assessment results, and offering feedback sensitive to students' circumstances. This professional learning provided by the system was accessible and flexible, considering the challenges of remote and rural settings.

In conclusion, strong assessment practices were vital in maintaining balance in teaching and learning, like the water cycle's role in sustaining equilibrium in Earth's ecosystems. By implementing effective and tailored assessment practices that consider the unique challenges faced in the Diocese, the teachers, school leaders and system leaders created a balanced and supportive learning environment for all students.

### *5.7.1 Triangulated Data Analysis in the Diocese*

Dovetailing the focus on robust assessment practices is the overarching theme of adopting a data-driven methodology, which found prominence in the educational discourse of the Diocese. Drawing parallels with the aforementioned balance of the water cycle, an integrated data ecosystem brought about equilibrium in academic decision-making processes, especially within context of the rural, regional, or remote settings. The provided *Correlation Plot* (see Figure 5.9) is a compelling representation from a school within the Diocese. It delineates the relationship between two key academic metrics for Year 2 students at a primary school: on the x-axis, the graph depicts the "A-E: English" scores for the second semester, while the y-axis showcases the "Year 2 PM Benchmarks" for the same year. The scattered data points suggest a strong linear relationship between these two variables, which is further underscored by the dotted diagonal line representing the correlation. Notably, the correlation summary indicates that the Year 2 A-E English scores from 2022 are a robust predictor of the Year 2 PM Benchmarks of the same year, boasting an impressively high correlation coefficient ($r^2 = 0.87$) and significant p-value ($p < 0.01$).

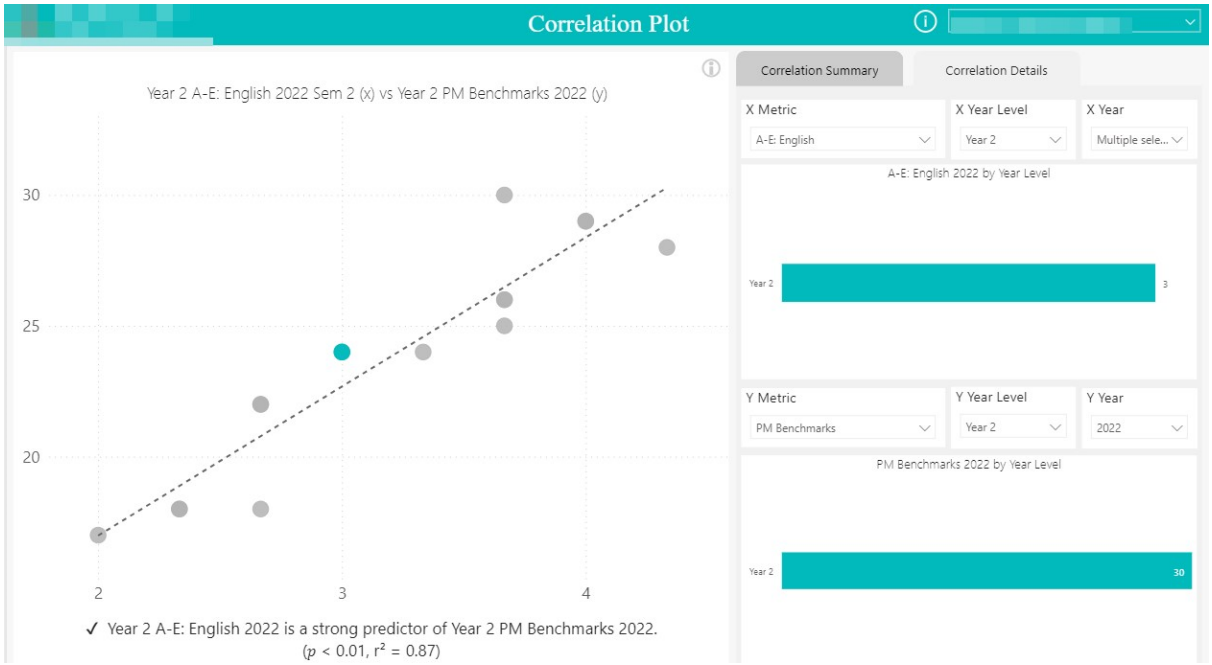



**Figure 5.9***: Correlation Plot*

**Note on Figure 5.9:** The 'Correlation Plot' in Figure 5.9, sourced from the Diocesan data ecosystem, illustrates the analysis of various key performance metrics, including literacy scores and reading benchmarks for Year 2 students. This example demonstrates the flexibility of the data-driven approach employed across multiple metrics and year levels, enabling a nuanced understanding of student achievements and areas for improvement using the correlation plot.

These data imply that as the PM Benchmark score increases, there's a concomitant rise in the A to E scores, reinforcing the intertwined nature of literacy competencies in young learners. As school leader #8 posits,

> … correlation plots are not just static figures; *they're a wake-up call to action*. Each outlier marks a student who needs us to look closer, to peel back the layers of their student pathway and intervene with precision. As we trace these unique data points, *we're not just tracking scores*; we're committing to a tailor-made educational strategy that reaches every single student where they are. (school leader #8; emphasis added)

As elaborated in the prior section, balance within the pedagogical framework is pivotal. For the schools across the Diocese, the triangulated data ecosystem approach provided an equilibrium in navigating the student pathways. Transcending geographical and resource constraints, schools embarked on a pioneering endeavour to foster data-driven academic

landscapes, with this initiative underpinned by the triangulation of data sources, integrating feedback from PM Benchmarks, PAT/NAPLAN assessments and writing work samples. The critical addition of teacher observations and judgements ensured that this data ecosystem approach encapsulated a broad spectrum of student capabilities:

> Through the lens of the data ecosystem, correlation plots encapsulate our Diocese's narrative, spotlighting both strengths and gaps in our collective educational approach. They guide us in deploying resources strategically, in fostering best practices that resonate across classrooms and schools. (system leader #4)

The holistic implementation of this data ecosystem strategy offered profound insights. Discernible patterns emerged, illuminating both reading and numeracy competencies across student cohorts. The observed correlations between myriad assessment tools underscored the model's robustness and predictive power.

Drawing across this discussion of intertwining strong assessment practices with the Data Ecosystem approach, it then becomes evident that both these elements fortify the teaching and learning cycle in the Diocese schools. The synergistic effect of tailored assessment tools and a consolidated data ecosystem culminated in a well-balanced, efficient and responsive academic environment, and are reminiscent of the water cycle's role in sustaining the Earth's ecological balance. The endeavours of the teachers, school leaders, and system leaders epitomise the ethos of collaborative, informed, and impactful education, setting a commendable precedent for others to emulate.

### 5.8 Analytical Summary

The micro-level exploration of school improvement within the Diocese provides significant insights into the school's role in enhancing education in rural, regional, and remote contexts. Through the Effective Learning and Teaching Cycle, schools demonstrate a fundamental capability to adapt pedagogical strategies to the unique challenges of these settings. This adaptability is crucial in addressing the research question concerning the school's role in enhancing rural education. It exemplifies the school's active engagement in nurturing a learning environment responsive to the varied needs of its student population.

Teachers, school leaders, and system leaders play a pivotal role in improving educational achievement, as evidenced by their collaborative efforts in implementing the Effective Learning and Teaching Cycle. This cycle is instrumental in planning, determining,

implementing, and evaluating school improvement processes, answering the research questions related to the roles of various educational stakeholders and the strategies employed. The micro-level actions, grounded in organisational ecology, provide a framework for continuous adaptation and responsiveness, essential qualities for teachers and leaders striving to improve educational outcomes.

Addressing how regional, rural, and remote schools can embark on effective school improvement, the research illustrates the necessity of data-driven decision-making, targeted teaching, and robust feedback mechanisms. These processes, reflective of ecological dynamics, ensure the school improvement strategy is not only implemented but also continuously refined, aligning with the research questions concerning the determination and address of school improvement processes. The research also sheds light on leadership practices at the micro level, which are central to the deployment of school improvement processes in rural, regional and schools. Leadership is not just about directive policy but involves fostering an environment where collaborative co-design and shared ownership of the educational process are paramount. This collaborative ethos influences the school improvement outcomes achieved, providing a direct answer to the research questions concerning leadership practices and their influence on outcomes.

In sum, the micro-level analysis of the Diocesan school improvement strategy reveals a multifaceted approach where the school's role transcends beyond instruction, encompassing a systemic commitment to professional growth, reflective practices, and communal advancement. The Effective Learning and Teaching Cycle stands as a testament to the school's potential to drive change and foster educational excellence in the face of geographical and contextual challenges. It underscores the significance of the research by highlighting the transformative potential of micro-level processes in catalysing school improvement and setting a precedent for educational advancements in similar contexts.

Adding to the analytical summary, the implications of these findings for rural, regional, and remote schooling communities are profound. The study highlights the critical need for schools in these areas to harness the power of the Effective Learning and Teaching Cycle, demonstrating its pivotal role in addressing unique educational challenges. Specifically, the adaptability and responsiveness of this cycle are vital in crafting pedagogical strategies that meet the diverse needs of students in varying geographical contexts. For rural, regional, and remote schools, the emphasis on data-driven decision-making, targeted teaching, and the implementation of robust feedback mechanisms emerges as essential components for fostering school improvement. The findings also suggest that leadership

within these communities must prioritise the creation of a collaborative, co-designed school ecosystem. Such an approach not only leverages the collective strengths of teachers, school leaders, and system leaders but also ensures the sustained engagement and participation of the wider school community. This collaborative model of leadership is particularly crucial in rural, regional, and remote settings, where resources may be scarce, and the sense of community plays a significant role in educational success.

Ultimately, the research underscores the transformative potential of adopting micro-level strategies that are tailored to the specificities of rural, regional, and remote educational contexts. By focusing on continuous adaptation, collaborative leadership, and community involvement, schools in these areas can significantly enhance educational outcomes and contribute to the broader goal of achieving educational equity and excellence.

### 5.9 Chapter Summary

In conclusion, the Effective Learning and Teaching Cycle proved to be a highly effective approach in addressing the specific needs of individual students in the Diocese. This comprehensive cycle involved using data to inform teaching and learning strategies, targeted teaching strategies to address individual needs, focused feedback on helping students understand their strengths and areas for improvement, and robust assessments to evaluate student learning and progress.

Targeted teaching was a critical component within the cycle, as it tailored learning and teaching practices according to each student's needs. The literacy block was an essential part of targeted teaching, providing dedicated time for teachers to focus on building students' literacy skills through explicit teaching, modelling, and guided practice. Teachers created a supportive learning environment that promoted student engagement, motivation, and academic success by employing a range of instructional methods, such as differentiated and small-group instruction. However, tailoring the entire teaching and learning cycle to the Diocese's unique needs and circumstances was crucial to ensure positive learning outcomes for all students. By utilising this comprehensive cycle, teachers were able to provide an effective and inclusive learning experience for their students, catering to their strengths and areas for growth. This case has also refined and extended Branson and Marra's (2022) model of an ecological ecosystem of school improvement by introducing a concept of a school improvement ecosystem.

## Chapter 6

## 6.1 Introduction: (Meso) Co-Teaching

This section explores *co-teaching* – the meso level – that contributed to school improvement in this case study's rural, regional, and remote Diocese. The co-teaching process exhibits parallels between the essential components of the co-teaching cycle and the stages of the water cycle, illustrating their interconnected nature and importance within the educational and natural ecosystems. This comparison aims to clearly illustrate the co-teaching process and its potential to address the unique challenges that teachers faced. Throughout this research, I delved into the co-teaching cycle, examining its various components, including co-planning, co-teaching, co-debriefing and co-reflecting. By relating each stage to a corresponding aspect of the water cycle—iteration, interconnectedness, collection and monitoring, abundance, and quality—the data offers valuable insights into the co-teaching processes and their significance in fostering a collaborative, supportive and effective teaching environment. Figure 6.1 highlights the meso level elements within the proposed school improvement ecosystem conceptual framework.

This chapter serves a dual purpose: *i)* to shed light on the intricacies of co-teaching as it unfolds within the rural, regional, and remote Diocese; and *ii)* to contribute to the broader discourse on effective educational practices in diverse contexts. To achieve these objectives, the chapter investigates the various components of co-teaching, namely co-planning, co-teaching, co-debriefing, and co-reflection, and their interconnectedness in the context of this Diocese. The chapter proceeds in a structured manner to provide a comprehensive understanding of co-teaching in this unique educational landscape. It begins with an overview of the co-teaching process as a whole and then delves into the individual components, each represented in a dedicated section. The journey begins with Chapter 6.2, "Co-Teaching: A Critical Strategy," where we explore the process of co-teaching in the rural, regional, and remote Diocese. In Chapter 6.3, "Co-Teaching: Interconnected," I will further examine the aspects of co-teaching that emphasise its interconnected nature, highlighting how multiple educators collaborate to deliver effective instruction in the classroom. Moving forward to Chapter 6.4, "Co-Debriefing: Collection and Monitor," I will delve into the crucial process of co-debriefing, focusing on the systematic analysis and evaluation of learning and teaching processes. Following that, in Chapter 6.5, "Co-Reflection: Abundance and Quality," I will explore the significance of co-reflection, drawing parallels with the continuous renewal and improvement observed in ecosystems. Finally, the chapter will conclude in Chapter 6.6,

summarising key insights and implications drawn from the study, reinforcing the interconnectedness of co-teaching components and its impact on the school improvement ecosystem. This structured approach ensures a cohesive examination of co-teaching to offer valuable insights and practical processes for school and system leaders.

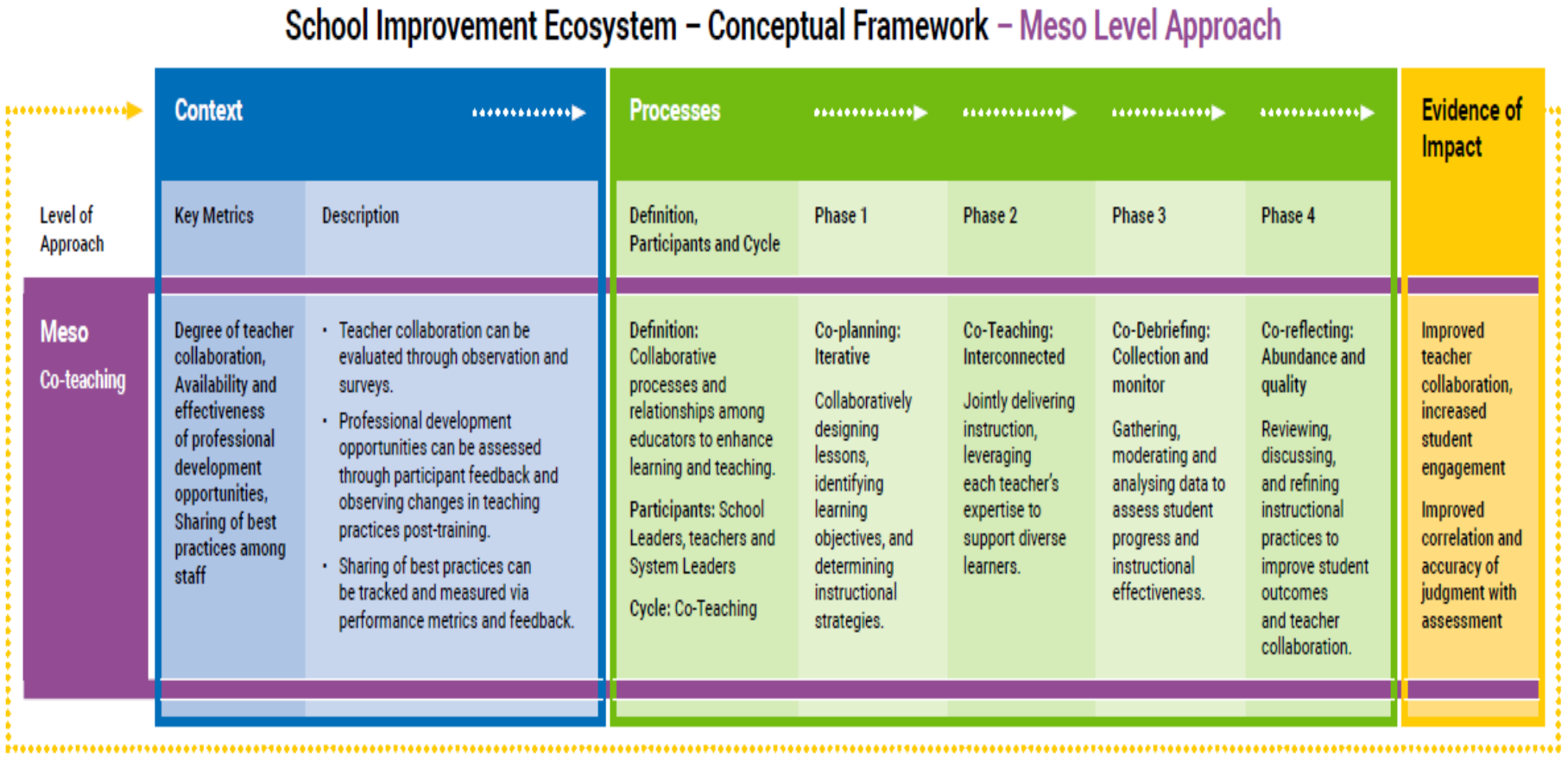



**Figure 6.1***: Meso-Level Approach to the Conceptual Framework*

**Note on Figure 6.1:** This figure represents my own creation, developed through a comprehensive analysis of the co-teaching practices observed in the rural, regional, and remote Diocese. It visually encapsulates the meso-level approach within the school improvement ecosystem, drawing analogies to the natural water cycle to elucidate the iterative, interconnected processes of co-teaching, including co-planning, co-teaching, co-debriefing, and co-reflecting.

## 6.2 Co-Teaching: A Critical Strategy

Co-teaching was an effective strategy for this rural, regional and remote Diocese in this case study. The Diocesan document, *the Non-Negotiables* (2018), states that co-teaching is when "two or more teachers worked collaboratively to plan, deliver, and assess instruction to a group of students in the same classroom" (p. 1). Co-teaching allowed multiple teachers, teacher assistants, school leaders, system leaders to share their expertise, knowledge and skills while providing students with individualised and differentiated learning and teaching (Fullan & Sharratt, 2022; Villa, Thousand & Nevin, 2013). As Rabin (2020) states, co-teaching "serves as a relational model in the formation of teaching practice" (p.145) and creates the conditions for learning.

Effective teacher collaboration was valuable in the implementation of the Strategy. Moreover, many participants talked about a broader common theme and a "shared moral purpose" [#5, system leader], and about "the importance of improving student learning" (Diocesan Office, 2018); both of which highlighted why the implementation of the Strategy was a success. Although difficult to define precisely, "shared moral purpose" could be seen critically as ensuring ethical integrity and a common language which permeated the school improvement ecosystem. Another facet was the co-planning, co-teaching, co-debriefing and co-reflecting processes that allowed teachers, school leaders and system leaders to work together to develop a shared understanding of learning goals, design learning and teaching processes that met the needs of all students, and the reflection on their teaching processes to improve student learning.

The in-depth analysis presented in this body of work aims to showcase the potential benefits of implementing a co-teaching approach in rural, regional and remote Dioceses. The co-teaching cycle mirrors the water cycle, highlighting the essential role of continuous collaboration, learning and adaptation to achieve improved student outcomes. Ultimately, this comprehensive examination of co-teaching and its connection to the water cycle seeks to provide a deeper understanding of the co-teaching process.

### *6.2.1 Co-Planning: Collaborative Design*

In the context of co-planning, the iterative nature of the water cycle serves as an apt analogy, as teachers engage in continuous cycles of co-planning, co-teaching, co-reflecting, and co-debriefing. Thus, refining learning and teaching processes and collaboratively improving their approaches to better meet the diverse needs of students, all ultimately lead to enhanced student outcomes and professional growth. Participants acknowledged that effective co-

planning improved learning, teaching, and well-being outcomes. Co-planning allowed teachers to work together to develop a shared understanding of learning goals and design teaching strategies that met the needs of all students. As Ingersoll and Strong (2011) noted, "Co-planning enables teachers to share their expertise and knowledge, leading to improved instructional practices and student outcomes, particularly in rural areas where resources may be limited" (p. 201).

During the co-planning process, teachers within schools in the rural, regional, and remote Diocese worked together. This was a newly enacted process that was initiated as part of the Strategy, which helped to establish clear and shared goals for learning and teaching, encouraged discussion of the learning goals and objectives for the lesson or unit, identified the standards or the addressing of learning outcomes needed, and considered how the lesson or unit fitted into the larger scope and sequence of the curriculum. Murawski and Lochner (2011) emphasised that "co-planning allows for a greater understanding of the curriculum and enhances the ability of teachers to differentiate instruction for diverse students" (p. 36). Moreover, establishing learning goals and objectives for co-planning teachers led to iteratively designed learning and teaching processes and activities that supported student learning. The teachers discussed and collaboratively decided on the most effective learning and teaching processes and materials that would help students achieve their learning goals, brainstormed activities, identified effective learning resources, and discussed strategies to differentiate learning and teaching to meet the diverse needs of students. Co-planning helped the teachers decide how to integrate technology or other innovative learning and teaching processes to enhance student learning.

After designing the lesson or unit, co-planning teachers determined the roles and responsibilities of each teacher when teaching. They discussed how they would divide activities, support each other during teaching, and address the needs of all students. System leader #1 highlighted the immeasurable impact of collaborative work such as co-planning within the CPLCs:

> The idea of working collaboratively in CPLCs provides professional learning that's probably *almost immeasurable*, in that it's – it probably happens almost by osmosis in some ways. Then the idea of a co-teaching cycle such as collaboratively planning by using data to lead learning, have been extended to all teachers. (#1, system leader; emphasis added)

Similarly, system leader #4 also emphasised the importance of CPLCs and their commitment to collaboration:

> Our CPLCs, a commitment to having a results-orientation and collaboration and a shared purpose and understanding. So, when we understand the benefits of a CPLC, we then have those CPLCs or the professional learning teams working within that learning community to improve the co-teaching cycle. We believe that planning in teams is an *essential feature*. We, of course, have a Catholic lens over that, so we always talk about the professional learning community in a Catholic context or a Catholic professional learning community. (#4, system leader; emphasis added)

The Diocesan document, *Addressing the Challenges of Rural, Regional, and Remote Education* (Diocesan Office, 2020), affirmed that a collaborative planning process helped teachers align their approaches, reduce workload, and enabled the delivery of more explicit teaching tailored to the specific needs of individual students. As stated in the document and as originally argued by Sharratt and Fullan (2012), "To achieve excellence in contemporary pedagogy, teachers must be supported by opportunities for ongoing professional learning including data literacy; data-informed co-planning; co-teaching; modelling and observation; co-debriefing; co-reflection" (p. 1).

This approach helps ensure that every student receives the tailored instruction they require for success. As system leader #2 discussed,

> The best co-planning sessions are the sessions whereby there is a large screen and teachers, school leaders and system leaders are sitting around the table in conversations. The PLC can analyse student achievement using the data ecosystem or they can analyse students' samples of work against a standard or there is one of our A3 templates that lead the group through a structured process that ultimately leads to improvement of student outcomes. [#2, system leader]

Continuing from the discussion on co-planning and assessment, teachers engaged in formative and summative assessments to continuously monitor and evaluate student learning throughout the teaching and learning process. This assessment approach aligns with the leadership and management principles advocated by school and system leaders, aiming to "demonstrate strong teams that enhance learning and teaching"[#2, system leader], as well as

to "efficiently and effectively use resources for the benefit of students" [#7, school leader]. As previously mentioned, this collaborative effort involved teachers, school leaders, and system leaders in assessing student learning, collecting valuable data, and using these insights to make necessary adjustments in their teaching methods. This iterative process played a crucial role in ensuring that learning and teaching strategies effectively met the diverse needs of all students, demonstrating the adaptability and effectiveness of co-teachers. In essence, it was akin to the continuous, iterative nature of the water cycle, where co-planning enabled teachers to refine their instructional approaches throughout the co-teaching cycle continually. This adaptability and improvement in teaching methods directly contributed to enhancing the overall learning experiences and outcomes of their students.

Moreover, to address any lingering reluctance or resistance towards the implementation of this Strategy, a key foundational aspect was the cultivation of the co-teaching cycle among educators. In essence, the co-teaching cycle aimed at fostering coherence, not only in terms of understanding the Strategy but, more crucially, in its practical application among teachers, school and system leaders. Indeed, establishing the co-teaching cycle played a pivotal role in ensuring the Strategy's success. Sustaining the co-teaching cycle required teachers, school leaders and system leaders involved in the improvement process to maintain high levels of optimism and confidence. This was achieved through the collaborative support system established among teachers, school leaders, and system leaders, including the Diocesan executive leadership team and principals. Furthermore, this collaborative spirit extended to the school leadership team and school performance leaders, facilitated through the instructional leadership team. This collaborative approach created a tangible sense of system-wide unity, often referred to as "systemness."

At the meso level, which acts as the intermediary between school leadership and individual classrooms, the emphasis was on fostering *collaborative teaching practices*, and particularly co-teaching alongside school leaders. Additionally, teachers frequently sought guidance from and consultation with their system leaders, which aimed to cultivate a collaborative environment that could facilitate the exchange of knowledge, skills and experiences across the key actors of the three levels: teachers, school leaders, and system leaders. The collaborative approach encouraged the pooling of resources and expertise, a characteristic mirrored in the co-teaching cycle. Ultimately, this led to a more personalised and effective teaching approach, directly influencing the classroom environment and students' learning experiences.

Key indicators at this meso level included measuring the extent of teacher collaboration, evaluating the availability and effectiveness of professional learning opportunities, and promoting the sharing of best practices among staff. Assessing teacher collaboration highlighted the cohesiveness of teacher teams, the efficiency of their teamwork, and their collective contribution to the educational process. Furthermore, the availability of professional learning opportunities and the sharing of best practices among staff reflected a commitment to continuous learning, which, in turn, contributed significantly to the quality of education provided. Recognising that the school improvement ecosystem is dynamic and interconnected, school and system leaders emphasised the importance of ongoing monitoring and evaluation to ensure the Strategy's continued effectiveness. By routinely assessing the data ecosystem, schools and system leaders made well-informed decisions regarding resource allocation and strategies for addressing challenges.

### *6.2.2 Establishing Systemness Through the Co-Teaching Cycle*

In addition to the concept of the CPLC discussed earlier, a notable shift towards what can be termed "systemness" emerged as a significant aspect of the Strategy. This concept of systemness was exemplified by a school leader, who emphasised its importance:

> I can see the difference, how – what the focus areas were, really, in those early years of my principalship on registration and compliance issues, really. Learning and teaching didn't even get a look-in, really, not from the system level. So, the impact that [the Director] has had on the system – to build *system-ness*, to improve student outcomes, has been incredible. Because I can see how it's grown, and how important it is, and the difference it's made to staff and to students. [#9, school leader; empahsis added]

This school leader underscored how the efforts of school and system leaders, grounded in the principles of systemness and the consistency of processes and pedagogy, played a crucial role in orchestrating a coherent and integrated school improvement process across the entire Diocese.

It is vital to recognise that support for a school improvement strategy is not guaranteed. As described in Chapter One, there is a wealth of research literature highlighting the prevalence of unsuccessful school improvement initiatives. This body of research not only reveals that failures outnumber successes, but also pinpoints participant resistance,

rather than logistical shortcomings, as a primary cause of these failures (Ball, 2008; Lewis, 2020; Lingard & Keddie, 2013; Sellar, 2015). Moreover, a major source of participant resistance is the lingering memory of prior unsuccessful school improvement endeavours. The Strategy was not exempt from this potential challenge. Data collected in this study indicated the presence of such discouraging beliefs among the participants. Some school leaders attributed long-standing pessimism about the purpose of education and narrow definitions of effective teaching and learning to previous unsuccessful attempts at sustained school improvement:

> In those days when [the Principal] went off to principals' conferences... we didn't really hear about what that was about. It was like, oh, the Catholic Schools Office wants us to do this, *blah, blah*, that we'll use a staff meeting to achieve that and then that was it. There was no big whole-scale school change that started at that point. [#10, school leader]

This school leader's perspective highlighted the need to overcome doubts and scepticism that stemmed from past school improvement experiences. Both current school and system leaders concurred that the roles of previous school and system leaders, and the traditional narrative of school improvement efforts within the system, were potential sources of lingering doubts regarding the initiation of another school improvement project. These doubts had to be effectively addressed in this Strategy to ensure its success.

A key factor in overcoming these lingering doubts was the Strategy's capacity to instil a sense of systemness. The Director acknowledged the vast geographical expanse of the Diocese, encompassing students, teachers, school leaders, and system leaders. Historically, schools had offered diverse learning and teaching experiences; however, consistency in learning and teaching experiences was lacking, even within the same school. Importantly, at the core of this Strategy was a close collaboration between the Diocesan Office and all schools, aimed at creating a more consistent approach to learning and teaching across the Diocese. Systemness – defined as the ability to provide a consistent approach for students and teachers, regardless of which school they attended– became a central shared priority (Diocesan Office, 2016, p. 2). Achieving this goal by aligning learning and teaching experiences across the wide array of Diocesan schools, teachers, and classrooms nevertheless posed a significant challenge, and the Diocese depended on the support of principals to navigate this challenge. Thus, cooperative support emerged as a recurring theme in

developing systemness, fostered through the creation of strong professional relationships between school and system leaders.

Effective communication was at the core of these relationships, and interviews with the school and system leader participants indicated that effective communication was instrumental to develop stronger teamwork. The Strategy's emphasis on communication enhanced system/school collaboration, relationships, and team cohesion, contributing to successful school improvement. This collaborative approach, built upon effective communication, led to stronger networking and, ultimately, more effective teamwork. For instance, in the Diocesan Office, this outcome was described as "systemness", where the development of shared understandings through effective communication served as the foundation for a united approach and commitment among school and system leaders throughout the Diocese, facilitating successful school improvement. One system leader emphasised systemness as a crucial driver for the Strategy's initiation:

> Systemness is… every school being on the same page, a shared understanding of the same language, and those pillars, our foundational pillars, have really given us a very strong basis from which to work. [#1, system leader]

For some, this notion of systemness resembled an ecology. When asked to describe their role in promoting and initiating the Strategy, some system leaders likened it to an ecological model due to its intention to interdependently network the entire Diocese within the Strategy:

> If we talk about systems models, it's an *ecological system*, because everything is interdependent and, at some stage, one might be more important than the other but everybody contributes. If one bit goes missing, the whole system suffers. [#1, system leader; emphasis added]

This interdependence was observed to have a significant impact on the system of schools:

> [The Director] has managed to achieve that alongside his work to really rebuild and strengthen the relationships with principals. Because prior to [Director], my understanding is that the CSO in the schools didn't have a good working relationship. There was a great mistrust of the CSO, and it was almost – I don't want to say adversarial, but certainly a really top-down approach to what you must be doing, and not a support-based model. [#1, system leader]

Other school leaders also embraced this ecological perspective:

> I see that our co-teaching model is definitely ecological in its structure. Everything is inter-dependent and networked. [#11, school leader; emphasis added]

System leaders thus held a clear vision of how school leaders, drawing on their diverse experiences, contacts, networks, and established relationships, could effectively achieve the Strategy's goals on their behalf. The strength of these networks underscored the significance of the system ecosystem in driving school improvement.

While this ecological model of interdependence proved valuable, the relatively small size of the Diocese meant that school and system leaders were more likely to know each other and, importantly, other members of the school and other system leaders. This network of relationships allowed schools to position themselves as part of a broader community:

> I think we're pretty lucky in that systemness is all good until the system gets too big. [this Diocese] is lucky – and it's like we talk about now with the new focus on middle leadership, middle leaders are influential because they've got their fingers in the pie. They're close to the action. [#11, school leader]

However, the participant also highlighted the challenges associated with larger school systems:

> In a similar way, leaders in systems can be influential when a system is not too big and they're actually close to the action. So, I've seen big systems where we may as well be a supermarket chain in terms of the impact that a leader has on the site. [#11, school leader]

This participant stressed the importance of clarity and consistency in the context of systemness:

> I just am really impressed with the whole concept of systemness because, as I've always said, clarity and consistency, you can't beat that. This is what's required. This is exactly what it looks like. This is how we talk about it. This is how we interact with it. This is what we expect to see when we come to visit. [#11, system leader]

Systemness was not only crucial for system leaders but also for some school leaders who recognised interconnected relationships as pivotal for implementing the Strategy:

> Leading school improvement is a real challenge because you're really working with people's world views and belief systems that often have been entrenched for a long time. [#11, school leader]

In summarising the essence of systemness within the Diocese, it is clear that its success hinged on the cultivation of a school improvement ecosystem. The interdependent relationships among teachers, school leaders, system leaders, amplified by the Diocese's manageable size, created a sense of shared belief and values. This harmonious interplay between clarity, consistency, and close-knit community interactions underpinned the implementation of the Strategy, ensuring that each school, while unique, contributed to and reinforced the strength of the entire system.

Another critical factor identified as crucial to the Strategy's success was the strength of cultivating relationships between school and system leaders. These relationships enabled school leaders to make effective school improvement decisions, knowing that robust decision-making processes would impact their schools positively:

> The Principal's position is about continually trying to make the right decisions for the system, school, and the students. [#7, school leader]

> If the system is very open to us if we go 'no' or 'this will be better,' then they're willing to listen if we've done the reading and the research. So, it's not like I just go and argue the loudest; it's more about using evidence-based practice. [#8, school leader]

The concept of systemness was therefore central to professional relationships within and between schools and the system, and particularly within intra-school and inter-school CPLCs:

> The impact that [the Director] has had on the system to build system-ness to improve student outcomes has been incredible because I – and I can see how it's grown, and how important it is, and the difference it's made to staff and to students. … You have to have a clear vision, and you really need to know what the

> big picture is, so what are you heading towards? It's got to be a vision that is open to all to be part of, so it's got to be quite aspirational, inspirational. [#4, system leader]

This perspective highlighted the widespread belief that cohesion and coherence, rooted in the concept of systemness and consistent pedagogical understandings and processes, propelled the momentum of a system-wide school improvement strategy. Collaborative efforts between school and system leaders led to the incorporation of new language into the Diocese's lexicon, notably in the annual strategic planning process initiated by the new Director.

This perception of cohesion and coherence as foundational elements in all professional relationships was reiterated by system leader #5:

> Relational is important. You can't get anywhere unless you've got strong relationships, and that professional relationship and knowing your people. You've got to know them individually and then collectively as well. [#5, system leader]

Importantly, as highlighted by school leader #8, this need for cohesive and coherent relationships extended within the school, particularly in the functioning of the school's instructional leadership team and CPLC:

> You need to have good teams, and work in teams, and have a real collaborative approach. So, being open to feedback and listening and discerning and really being open in your decision-making from the people. [#8, school leader]

These excerpts, reflecting diverse viewpoints, illustrated how participants invested considerable time working collaboratively to address the multifaceted demands of the school improvement Strategy. This Strategy introduced a novel approach that successfully engaged and inspired educators and learners alike. Unlike previous attempts, it was designed to be more inclusive and responsive to contextual needs. As implemented, it fostered a sense of ownership among school and system leaders and used evidence-based practices to inform instruction. These strategic shifts not only increased motivation but also led to measurable improvements in learning and teaching outcomes.

Furthermore, the themes mentioned earlier, such as collaboration within CPLC, contributed to a deeper understanding of the concept of systemness. As articulated by another school leader,

> … [the Diocese] was very decentralised, I think, and I think in the past few years, it's worked its way to finding a nice balance between helping schools with servicing them and supporting them in the agenda; setting the agenda, to some extent, in collaboration with schools, but working with them and supporting them in achieving. Learning outcomes, I think that's probably become more of a focus in our Catholic Schools Office now than it had been in the past. [#7, school leader]

These perspectives provide evidence that the Strategy's focus on strong school and system relationships and school to school partnerships had a measurable impact on both school and system leaders, which ultimately supported the goal of improving student learning outcomes within the Diocese. Importantly, this change management style diverged from the traditional narrative where the system imposed itself on schools via its policies and actions. As a result, in this school improvement strategy, schools received substantial support from system leaders to develop student learning scaffolding tailored to the specific needs of their students. Such an emphasis on systemness aimed to align the system and school goals more closely. Consequently, collaboration, team cohesion, and high levels of relational trust were by-products of this co-teaching cycle, as emphasised by another school leader, who stressed the importance of measuring learning and teaching outcomes:

> Over the last few years, we put in metrics around learning and teaching and positive behaviour in school improvement, but then needing to be able to relate that to CSO personnel, parents, and to staff was really important. [#2, system leader]

With all these elements working in tandem, the Strategy embarked on a journey to establish systemness through co-teaching and collaborative leadership, fostering a unified approach and shared commitment among school and system leaders, ultimately driving successful school improvement.

### 6.3 Meso: Co-teaching: Interconnected

In the Diocese, we have seen how co-teaching functioned like an ecosystem with interconnected elements, whereby two or more teachers worked collaboratively to plan, deliver and assess learning and teaching to students in the same classroom. This interconnected system allowed multiple teachers, teacher assistants, school leaders and system leaders to share their expertise, knowledge and skills while providing students with individualised and differentiated instruction.

Drawing a parallel to the interconnectedness of the water cycle, Fullan and Sharratt (2022) have described co-teaching as a process where "instructional coaches and classroom teachers or any two teachers may partner to collect and interpret class data and then use data to determine a focus and an action" (p. 156).They also emphasised the importance of co-planning, co-teaching, and co-debriefing as interrelated elements in developing effective instructional practices and improved student outcomes. This perspective aligns with Sheridan's (2020) analysis of co-teaching in Madden's compilation, which emphasises the significance of 5-week colloborative intervention strategies having an impact on learning, teaching and wellbeing outcomes. Bandura (1977) has similarly emphasised the interconnectedness of people and their environment, explaining that "psychological functioning is explained in terms of a continuous reciprocal interaction of personal and environmental determinants" (p. 11). Teachers could share their knowledge and skills by working together, providing students with a more comprehensive education, much like the water cycle redistributes resources to different areas.

One such co-teaching model that was particularly was the *one teach, one assist* model. In this model, one teacher took the lead in delivering instruction, while the other teacher provided support and assistance to individual students or small groups, (Villa, Thousand, & Nevin, 2013) similar to how different elements of the water cycle support each other. The co-teaching model allowed for more individualised attention and support, which was particularly important in the rural, regional and remote Diocese. Another effective co-teaching model was the *parallel teaching* model, whereby the class was divided into two groups, with each teacher responsible for teaching one group (Villa, Thousand, & Nevin, 2013). Both groups received the same instruction and completed the same tasks in smaller groups, albeit under the guidance of their respective teacher. This model can be likened to the various stages of the water cycle coinciding in different areas to maintain a balance while still maintaining distinct stages at other times.

Regardless of the specific co-teaching model used, effective co-teaching nevertheless requires strong collaboration and communication between teachers, much like the interconnected elements of an ecosystem. Co-teachers had to work together to plan and deliver instruction and be willing to share their expertise and learn from each other. Meyers and Van Gronigen (2019) have emphasised the importance of identifying and understanding "who are the system and school leaders that bring about change in school improvement within schools, and what processes, such as learning fast, constitute those states that are critical to school improvement" (p. 265). Embracing collaborative practices and working to improve teaching and learning, school and system leaders were quickly equipped to ensure that students received a high-quality education. Participants discussed how effective co-teaching improved student outcomes, increased teacher effectiveness and satisfaction, and offered a more positive classroom climate. However, co-teaching also presented challenges, such as the need for significant time and effort, as well as the need for teachers to share control and responsibility for the classroom. These challenges were more pronounced in this Diocese, where the teachers had to face additional challenges, such as teacher shortages.

In conclusion, co-teaching functioned like an interconnected ecosystem where teacher collaboration and communication formed the basis for success. Participants recounted how teachers shared their knowledge and skills by working together to provide the students with a more comprehensive education. However, effective co-teaching requires a commitment to ongoing reflection and adjustment. With these elements in place, co-teaching was a valuable approach for each of the teachers in their support of student learning and growth in this Diocese. The interconnectedness of co-teaching models, much like the elements of an ecosystem or the water cycle, allowed for the sharing of resources and expertise, leading to improved learning and teaching processes and student outcomes. By embracing the interconnected nature of co-teaching and fostering strong collaboration and communication, teachers worked together more effectively to meet the diverse needs of their students and enhance their educational experiences.

### *6.3.1 The Primacy of Co-Design and Collaboration*

During the interviews for this research, a common perception amongst the participants was the achievement of coherence in not only understanding the Strategy but also, and perhaps more importantly, its practical enactment. At the core of this impression was thought to be the co-design of the delivery of the system priorities by the system and the schools. For example, this collaborative design relationship was described in a variety of ways:

> We talk [with our teams] about improving the conditions of leadership, teaching, learning, faith development. They're the things that you can see and hear, the relational stuff, before you even identify what work you're going to do. [#11, school leader]

> [The system leaders] are trying to adapt our work to co-design our work with the schools. So rather than us saying, this is what's happening. We're saying, here's our themes for the year, for next year, here's where you've got your timing. What we're doing is basing our support for schools around – and our teams support for schools around their school improvement roadmap. [#2, system leader]

> There's more collaboration now - so our Diocese is quite small, so we actually do have really good connections across our school and to the Catholic Schools Office, they are a visible presence here. [#8, school leader]

The above excerpts describe how school and system leaders recognised the need for the Strategy to be embedded into the culture of the Diocese through a co-designed process between system leaders and school leaders, as this was believed to have the most chance of success if all parties were equally invested in the design and implementation processes. Furthermore, the sharing of this belief between the system and the schools was a driving force in facilitating the successful implementation of the Strategy. The director remained totally committed to the process of encouraging school leaders and system leaders to work together. This process encouraged collaboration that could, in turn, foster school improvement. Sharing of beliefs was considered a key aspect in shaping and changing culture and so it was adopted by system leaders to assist schools in being able to broker this knowledge about the Strategy.

The positive relationships developed between school and system leaders founded upon the primacy of co-design and collaborative processes encouraged broad support and commitment from school personnel. Indeed, evidence suggests that key school personnel readily promoted the strategy when engaging with stakeholders:

> I think listening is one of the big ones, being able to listen. Not just hear things, but really listen and have a deeper understanding of where people are coming from and then being able to ask the right questions following that up. [#5, system leader]

Building these strong relationships builds trust in the system, and consequently trust in the process. In this case, the adoption of a project management methodology was a crucial step:

> The idea of making it visible to everyone in the project team that: this is the project, this is how we'll be evaluated, and we need to collect this data along the way, is really important. [#1, system leader]

These perspectives describe how the engagement process included enabling schools that were performing well to enjoy greater autonomy.

The findings from these interviews illustrate the pivotal role of co-design and collaboration in achieving a deep, shared understanding and practical application of the Strategy across the Diocese. The active participation and mutual investment of both school and system leaders in the design and enactment phases fostered a sense of shared ownership and commitment, which proved to be instrumental in driving the Strategy's success. This collective approach not only facilitated the alignment of goals and resources but also built a foundation of trust and respect, which is essential for the sustainable evolution of school improvement processes.

One method of how the system and school leaders confirmed these school improvement processes was through ‘learning walks and talks’ (Diocesan Office; 2018), whereby the Instructional Leadership Team would assess and improve the learning and teaching within the school:

> The research shows very clearly that instructional – principals as instructional leaders make a huge difference to the capacity of teachers, and the very simple but effective idea of learning walks and talks, which Lynn Sharratt advocates, has made an enormous difference in our school. [#4, system leader]

> We worked with the school on co-designing school improvement processes, and we went out there for two days. On the first day, we are in classrooms, and we are teaching. We are taking small groups, we’re doing guided reading. We were getting an understanding of where the students are at with their learning and teaching outcomes. [#5, system leader]

The sharing and challenging of belief systems in the Strategy was also about co-designing with teachers about what co-teaching looked like and how it can be used to improve outcomes:

> Every day is a learning day, and our day has become rather tight in that we have a specified English block, and you have to achieve certain things within that block. We've got a maths block. Co-teaching is a great vehicle for this. [#10, school leader]

However, despite the general acceptance of the new strategy being implemented, there were still instances of school staff feeling channelled into the new direction:

> Some people in the process got overwhelmed, some people thought that don't we have any say in this, so it was a lot of pressure on leadership teams to continue to be – to challenge and support and remain really excited. [#10, system leader]

Thus, an essential part of the Strategy focussed on supporting school leaders in overcoming any localised uncertainty or resistance among their school staff.

This concept of helping school leaders towards getting their staff "on the bus" [#10, school leader] was clearly deemed to be an essential factor in the Strategy. Another participant emphasised how this collaborative support for each school principal was not solely about working more effectively with all staff but also helping them to ensure that the school's parents were also positively engaged with the changes:

> So, in terms of our school improvement, last year, we put in metrics around learning and teaching, positive behaviour, those sorts of things in the school improvement, but then needing to be able to relate that to parents and to staff was really important. [#8, school leader]

A similarly positive view of the school improvement strategy was held by school leader participants, too, but often from a more contextually specific perspective. For example, the following school leader assessed the success of the strategy from its capacity to change teacher practices regardless of the school's limited physical facilities:

> The change in what we have done here in regard to the whole shift about collaboration and co-teaching has been quite huge here, in old buildings. We didn't want to wait until we got a new school, so we implemented change. [#10, school leader]

The observed transformation in collaborative professionalism among the newer school and system leaders appears to have played a role in driving formal changes within the Diocese. Notably, their awareness of the shifting dynamics stemmed from internal sources within the Diocese. Although certain attitudes remained deeply rooted, such as perceiving a disconnect between the system and schools, participants expressed an increasing optimism regarding the working relationship between schools and system leaders.

With the passage of time and a steadfast dedication to ongoing co-design and collaboration, school leaders came to gradually acknowledge the pivotal role that schools played in the school improvement agenda:

> We presented that as a draft to the school principals and I workshopped that with them. They gave us feedback. We did that over a period of six months. […] We had a one-pager that says, these are the things that I would expect to see in schools and classrooms. [#4, system leader]

This emerging perspective sought to establish co-design in the success of the Strategy and based on what collaborative ideas materialised throughout the Strategy's progression:

> It was about building systems. So, I kept saying to them, schools don't improve in isolation. …. Be as concerned about the success of your school as you are about the success of the other schools in the system. [#4, system leader]

The participants' responses highlighted that school and system leaders were working collaboratively to build confidence and awareness of school improvement practice. In particular, much of the success of accepting the school improvement project came from system leaders building trust with principals through different forums, such as the quarterly Principals Meeting, over multiple years. Designed with a strong learning and teaching focus, this meeting was first introduced in 2015 as a means for principals to come together to share experiences, learn from the experienced school and system leaders and external consultants, and foster relationships.

As emerged over the course of the interviews, these Principals Meetings proved to be a critical platform in sharing information about school improvement:

> So, this is the research. What's the theory of action that I favour? Presenting it in such a way that you're looking for feedback from the team of school principals around where they find that challenging and where they find it positive, and so via the process of a series of presentations and meetings with people as a group, but also one-on-one with them, this is the theory of action. [#4, system leader]

Moreover, one participant specifically described how the Principals Meetings started to foster a degree of agreement and shared belief and values:

> There is a lot of sharing at Principals' meetings. This term, in particular, we had some little showcase projects that about half a dozen schools shared and seeing how they have taken on Sharratt's 14 parameters and particularly with regard to, say, case management. So how they are now looking at students who require additional support, and that whole wraparound process for the student, and how it is affecting that positive growth for them, and how they're tracking all of those things that – the interventions that we're putting in place and monitoring their growth. [#1, system leader]

In addition, these school and system leaders also supported teachers in fostering an understanding of what approaches might be effective, or ineffective, which proved beneficial in the co-design of the Strategy, alongside the utilisation of data.

Furthermore, the shared belief and values that aligned with the Strategy, coupled with a co-designed process that aided in its implementation, were among the most frequently cited factors for optimising participation in the Strategy. Strong teamwork emerged from the interactions with school and system leaders working together. Factors that had their genesis in a commitment to co-design processes included those of systemness, collaboration, teamwork and trust which then enabled coherent and collaborative school improvement. Also, a central outcome of the co-design and collaborative process was the establishment of what came to be referred to as the "Non-Negotiables" within the Strategy, and these are discussed in the next section.

### *6.3.2 Introducing the Non-Negotiables*

As mentioned above, an important outcome of the Diocese's Strategy was building strong teams founded on common beliefs and practices. To this end, the Director enabled the building of strong teams by urging schools to implement what came to be called the *Non-Negotiables of the Catholic Professional Learning Community* (Diocesan Office; 2018). These Non-Negotiables were centred around the work of Sharratt and Fullan (2012) and were designed with the intention of creating a set of system-wide unifying parameters and practices that would underpin how school and system leaders work more effectively and productively together. As such, these Non-Negotiables were a suite of school improvement strategies that could only be implemented by school and system leaders working together. Participants recalled that much of the iteration involved using the schools to improve learning and teaching outcomes through the vehicle of the Non-Negotiables directly impacted classrooms and changed leadership and school practice.

Specifically, the Non-Negotiables were a list of school improvement strategies that were co-designed with school and system leaders and expected to be embedded in schools to achieve the desired state of school improvement. The Non-Negotiables for both the system and the schools were listed under two distinctive objectives of (a) working towards developing quality, and (b) embedding quality through regular review and evaluation, in the following way:

a. The CSO and schools should be working towards developing quality:
    - Norms for teams that underpin effective CPLC.
    - Data analysis reflected in physical data walls.
    - Case management based on data that raises questions not judgement.
    - Learning walks and talks using the '5 Questions' and based on agreed protocols.
    - Programs for new syllabuses that go beyond the commercial product.
    - Literacy blocks; uninterrupted and based on agreed protocols.
    - Deep knowledge of curriculum.
    - Learning Frameworks that support teachers in achieving the 'worthwhile lesson' through agreed pedagogy.
    - Adjustments for Students with Disability (SWD) reflected in Personal Learning Plans.

- Personalised Learning Plans for Aboriginal and Torres Strait Islander students.
- Numeracy plans that are integrated into school and classroom programs.
- Plans for the introduction of the '5 High Impact' Strategies 2018-2020.
- Professional learning in staff meetings focussed on 'non-negotiables.'

b. The CSO and schools should be working towards embedding quality through regular review and evaluation of:
    - Catholic Principles and Values in classroom programs.
    - CPLC aligned to the Collaborative Inquiry Initiative.
    - Student performance data.
    - Case management.
    - Learning walks and talks.
    - Gradual Release of Responsibility as good pedagogy.
    - Deep knowledge of curriculum.
    - Learning intentions and success criteria.
    - Literacy, numeracy and Religion blocks (secondary schools to consider model(s).
    - Assessment for, as, and of learning.
    - Instructional Leadership Teams

These non-negotiables highlighted the importance of identifying the student and the teacher at the heart of a school improvement as a characteristic of systemness and to boost coherence. The introduction of the non-negotiables was overall positive based on participants' reflections and brought the benefits of consistency of language and classroom practice:

> The change in direction with the Non-Negotiables was immense. It brought about a learner centred focus for teachers and the ways of looking at data for all students. [#10, school leader]

> The non-negotiables of a CPLC talks about the things that everyone knows: what data walls, learning walks and talks and case management meetings look like. The big success of systemness that the [School Performance Leaders] have been driving

> is the setup of the data ecosystem. That is the evolution of the Non-Negotiables and the work that we have been doing. [#5, system leader]

After considering the Non-Negotiables, it becomes necessary to address the significance of review and feedback in the co-teaching process. This mechanism enables continuous refinement of the co-teaching approach, ensuring its ongoing dynamism and relevance.

### 6.4 Meso: Co-debriefing: Collection and Monitor

In the context of the Diocese, co-debriefing emerged as a vital element of co-teaching. This process facilitated teacher reflection on learning and teaching methodologies, enabling them to make essential adjustments to enhance student learning outcomes (Dunn, 2017). Co-debriefing involved analysing data and reflecting on teaching practices to identify strengths and weaknesses, with teachers then making the necessary changes to improve future lessons (Sharratt & Fullan, 2012). Co-debriefing functioned much like the collection and monitoring stages in the water cycle, with both processes acting as essential steps for maintaining the health of their respective systems.

The water cycle is a natural process involving water's continuous movement in the environment through evaporation, condensation, and precipitation (de Jong, 2005). Just as the water cycle relies on the collection and monitoring of water to sustain life on Earth, co-debriefing depends on the systematic analysis and evaluation of learning and teaching processes to enhance the quality of education in the classroom. In both cases, these vital processes contribute to their respective system's overall health and effectiveness. Furthermore, Villa, Thousand, and Nevin (2013) argue that co-teaching involves teachers and school leaders working together to achieve at least one common publicly agreed-on goal, such as improved student outcomes. The designing of co-debriefing sessions was collaborative and supportive, with teachers working together to analyse and evaluate the effectiveness of the lesson. Teachers used various methods to facilitate debriefing sessions, including group discussions, one-on-one meetings, and peer observations. Barger-Anderson, Isherwood, and Merhaut (2013) refer to this as "co-design," which entails establishing or reframing strategies for promoting collaborative practices across grade levels and content areas (p.6). Collaboration between teachers during co-debriefing sessions mirrors the different processes that interact and support each other in the water cycle.

During co-debriefing sessions, teachers discussed what worked well in the lesson and what did not, examining the impact of various teaching strategies and materials. They

analysed student work samples and assessments to identify areas of success and improvement. Teachers also discussed their teaching practices, reflecting on how they could improve their learning and teaching to meet the needs of their students better. This reflective process is like the monitoring stage in the water cycle, where adjustments ensure the optimal functioning of the system. Co-debriefing served as a significant opportunity for teachers to receive feedback and support from their colleagues. This peer-driven feedback mechanism enabled teachers to identify and address areas of improvement. Consequently, the cycle of receiving constructive feedback and making necessary adjustments played a key role in enhancing their learning and teaching strategies. This, in turn, contributed to improved student learning outcomes.

Another benefit of co-debriefing was that it promoted a culture of collaboration and continuous improvement. Kozlowski and Ilgen (2006) assert that co-design brings about a process of engagement and co-construction, leading to continuous improvement and success in new contexts. The teachers developed a shared understanding of what constituted effective learning and teaching and worked towards common goals by working together to analyse and evaluate teaching practices. Participants viewed this process as leading to increased teacher buy-in and a greater sense of ownership over the learning and teaching process, ultimately improving student outcomes. Similarly, the continuous and interconnected nature of the water cycle ensures that water resources are constantly replenished and maintained for the benefit of all living organisms. Participants commented that making the most of co-debriefing sessions was important for teachers to approach the process with an open mind and a willingness to learn from their colleagues. Having a growth mindset required school and system leaders to create an environment of trust where teachers felt comfortable sharing their experiences and receiving constructive feedback without fear of judgement or criticism. Similarly, the water cycle relies on the harmonious balance of its various stages, with each process contributing to the ecosystem's overall health.

Taken together and drawing across the participants' insights, it is possible to state that practical co-debriefing sessions in the Dioceses should include the following elements:

1. Establishing clear goals and expectations for the co-debriefing process, including the purpose of the session and the desired outcomes (Diocesan office, 2018).
2. Creating a structured format for the co-debriefing, with time allotted for discussing specific aspects of the lesson, such as learning and teaching processes, student engagement and assessment results (#1, system leader).

3. Encouraging active participation from all co-teachers, ensuring that everyone had the opportunity to share their insights and perspectives (#4, school leader).
4. Focusing on evidence-based feedback, teachers refer to specific examples from the lesson to support their observations and suggestions (Diocesan Office, 2015).
5. Emphasising a growth mindset, teachers could view the debriefing process as an opportunity to learn and grow rather than a critique of their performance (#5, system leader).
6. Developing an action plan for improvement, with teachers identifying specific steps to address areas of concern and enhance their learning and teaching processes (#11, school leader).

Co-debriefing played an essential role in teachers' ongoing professional development in this rural, regional and remote Diocese. By regularly reflecting on their learning and teaching processes, teachers continuously refined their skills, adapted their teaching strategies to better meet the needs of their students, and improved student outcomes. In the same way, the water cycle's continuous process of evaporation, condensation, and precipitation ensures the availability of water resources for all living organisms on Earth.

In conclusion, co-debriefing can be compared to the collection and monitoring stages of the water cycle, as both processes are essential to the health and effectiveness of their respective systems. By regularly analysing and evaluating learning and teaching processes through co-debriefing sessions, school and system leaders stated how teachers worked together to enhance their students' education quality. Just as the water cycle relies on the interconnectedness of its various stages to maintain the balance and health of the ecosystem, effective co-debriefing depends on the collaboration and continuous improvement of teachers to promote student learning and growth.

### *6.4.1 A Commitment to Review and Feedback*

The final aspect of the Strategy highlighted by the research participants as being integral in its success was the perceived nature of the review process. To evaluate the benefits of the Strategy, the Diocese created a school improvement and review model. At the heart of this model was an evaluation of the effectiveness of the school leadership team. The Diocese was able to evaluate the Instructional Leadership Team because strong relationships had been forged between school and system leaders. Also, the Diocese was able to evaluate what was happening in schools by the use of the CPLC to engage in dialogue with schools in two

meetings during the year. In this meeting, an aspect of the co-design approach involved employing language that not only aligned with contemporary professional perspectives, but also sought to evaluate the effectiveness of methods like structured literacy blocks.

This evaluation was done through employing various techniques, such as utilising the data ecosystem, conducting case management meetings, and performing learning walks and talks. The Diocese reported this process in the *Layers of Success* (2018) as:

> The Term 1 meeting includes a contextualisation statement regarding the school's current position and how the AIP will address the prioritised areas of focus. The Term 4 meeting takes the form of a shared reflection on the year's progress and intended AIP goals for the following school year. The audience provides constructive feedback and suggestions to the presenting school. (Diocesan Office, 2019, p. 3)

Furthermore, subsequent to releasing the initial version of the Strategy, the executive leadership team actively pursued additional feedback especially from the principals in 2021. The goal of the feedback was to assess the adoption of its language, tone, and case studies to further refine the use of school performance data:

> I think it's – the great – a greater focus on teacher practice to improve student outcomes. I think that is the key. Improving student outcomes and wellbeing is always the focus. That's the focus for everything that we do. [#5, system leader]

The invested time and effort between school and system leaders collaborating between all school and system leaders that significantly contributed to improved learning, teaching and wellbeing outcomes. Subsequently, the idea of the CPLC bringing collaboration and consistency of practice into school improvement was a source of knowledge as well as pride in achievement:

> I think that is something that I'm really proud of, that we've got consistency of practice across the school, and you can see the benefit of it, of all the professional development that we've put into this, and in a contemporary space. [#9, school leader]

The Diocese's dedication to ongoing review and responsive feedback has proven crucial, ensuring the Strategy's adaptability and sustained success in enhancing educational outcomes.

### *6.4.2 The Development of a More Professional Mindset*

Together, these key structural changes associated with leadership, governance, professional partnerships, and effective and consistent communication resulted in gradual changes in participants' professional mindsets and outlooks. For example, the distinct focus of the Strategy was identified by several participants as having a clearly articulated ethical purpose of improving teaching:

> The purpose of school improvement is just trying to make sure that teachers and processes all running along smoothly to ensure that you can get to those improvement goals. [#7, school leader]

Moreover, no longer was school improvement considered to be solely related to something happening in a single school but, rather, it was a system-wide, system supported, school-based, and unified approach to improving student learning throughout the Diocese:

> But it's certainly that collaboration is getting stronger and stronger. With the help of [the system leader], we've actually developed [a team between the three schools]. We've got similar demographics I guess. The collegiality and the conversations between the three of us as principals is *really strong*. [#7, school leader; emphasis added]

Like many others, the perspective above involves a blend of elements that encompass the role this participant perceived themselves undertaking to enhance the conditions of learning, teaching, and wellbeing for students. This role serves to foster a suitable environment for the school leader's acceptance and adoption of school improvement. Aligned with this, one participant also observed how the Diocese reacted constructively to providing extra funding and new roles within the school:

> [The impact of Leader of Pedagogy] in terms of professional learning teams and the effectiveness of teachers working collaboratively to reduce the workload and bring about better support of students was, in fact, happening. [#4, system leader]

Together, these excerpts depict a shift in professional perspectives, incited by a variety of factors and a steady transition away from "the old CSO way" towards embracing a new paradigm.

A connected theme that surfaced during the interviews, potentially expediting this change, was the forward-thinking mindset of younger system and school leaders, often those in middle leadership roles, towards leadership and issues of school improvement. The example below exemplifies this particular shift in attitude:

> I think there's a bit more creativity, especially in the way that they - when things come up, because a lot of those cases, the resources aren't there, or the experience isn't there that you find in the metropolitan schools. But I also think there's also - which can be a good and bad thing if there's a lot more community feel and support for each other, whether that be staff to staff, staff to parents, community and students [lead] with more of that in the remote than in the metropolitan. [#5, system leader]

These relationships between school and system leaders were enhanced with the outcome being improved student outcomes, as one Principal described:

> I think in the past few years it's working its way to finding a nice balance between helping schools with servicing them and supporting them in the agenda; setting the agenda, to some extent, in collaboration with schools, but working with them and supporting them in achieving learning outcomes. [#7, school leader]

Collectively, these excerpts depict how school improvement was a natural successor and organically followed the initial efforts of cultivating and integrating leadership capabilities into professional learning, a process made possible through the Strategy's key structural features outlined above. The resulting strong professional relationships built throughout the Diocese were then complimented through a commitment to making school performance data not only more understandable, but also by encouraging school leaders and teachers to utilise the wealth of data available and using it to influence each school's implementation of the Strategy. This outcome will be described in more detail below.

The implementation of the Strategy was borne from a partnership between school and system leaders, looking closely at school improvement and learning and teaching outcomes:

> The major change of processes is using data to lead learning. One of the things that we have done is to create a data ecosystem. In terms of looking at the data ecosystem, we can drill down and look at our learning and teaching outcomes and better target resources for school improvement. We have an understanding of literacy learning and teaching outcomes. [#3, system leader]

The process detailed above aligns with the one described around making the process collaborative and focused on learning and can be related to Dufour's notion (2016) that a professional learning community must exist at the very heart of schooling. An additional aspect of the Strategy that was designed to enhance collaboration and to guide focus was the inclusion of a list of non-negotiables culminating in a comprehensive Strategic process.

### 6.5 Meso: Co-Reflection: Abundance and Quality

The water cycle serves as an apt analogy for co-reflection in this rural, regional, and remote co-teaching context. The water cycle, consisting of evaporation, condensation, and precipitation, ensures that water resources are continuously replenished and purified, supporting the health and vitality of the ecosystem. When all stages of the water cycle function as intended, water's resulting abundance and quality contribute to the overall well-being of the environment and its inhabitants. Similarly, co-reflection in the co-teaching context can lead to an abundance of teaching strategies, improved teaching quality, and, ultimately, better student outcomes when all components of the process work in harmony.

These stages can each be considered individually, as well as in light of their collective interrelationships. For instance, *evaporation* in the water cycle is compared to the initial stage of co-reflection, where teachers gather their experiences, insights, and knowledge. Just as water evaporates from various sources, such as rivers, lakes and oceans, teachers' experiences and insights are drawn from their unique teaching backgrounds, personal observations, and interactions with students. This stage lays the foundation for the co-reflection process, providing the necessary material for teachers to engage in meaningful discussions about their learning and teaching processes. Next, *condensation* in the water cycle represents the collaborative aspect of co-reflection, where teachers come together to discuss their experiences, challenges, and successes. As Darling-Hammond and Baratz-Snowden (2007) have argued, "when co-teachers give each other feedback, they both have opportunities to learn from teaching" (p. 145). Also, just as water vapour condenses into clouds, teachers' insights and knowledge merge during co-reflection sessions, creating a

space for shared understanding and collective growth. This culture of collaboration and continuous improvement aligns with the sense-making and co-construction model that Datnow and Park (2009) favours, which considers change arising from actors within education and outside forces and is multi-directional. During these sessions of co-reflection, teachers identified improvement areas, developed strategies to address challenges and shared effective teaching practices with their colleagues. This collaboration and collective sense-making contributed to improving instructional approaches and positive outcomes for students, teachers, school leaders and system leaders.

Finally, *precipitation* in the water cycle symbolises implementing the insights and strategies gained during co-reflection. As Rankine, Reitsma and Willis (2022) demonstrated in their study, developing a culture of collective assessment literacy, and implementing processes that encourage collaboration and focused discussion of student work, are critical components of co-teaching. As rain and snow replenish and nourish the environment, applying new teaching strategies and approaches nourishes the educational environment, improving student outcomes. By incorporating the lessons learned during co-reflection, teachers were able to adapt their learning and teaching processes to meet the needs of their students better, resulting in increased academic performance and engagement. Just as the water cycle ensures the ongoing availability of water resources for all living organisms, co-reflection in the rural, regional, and remote co-teaching context guarantees a continuous supply of fresh ideas and strategies for teachers. This ongoing process of gathering insights, collaborating with colleagues, and implementing new strategies contributed to a healthy educational ecosystem characterised by abundant people resources and support for teachers and students.

Moreover, just as the water cycle purifies water through evaporation and precipitation, it is argued that co-reflection can refine and improve teaching practices. By identifying areas for improvement and sharing effective strategies, teachers continuously purified their learning and teaching processes, leading to better teaching quality and improved student outcomes. One system leader highlighted the approach being taken as:

> … our evidence of impact really happens where we correlate the standardised assessments of NAPLAN and PAT at the school and system level with the assessments of the classroom like A to E. [#1, system leader]

In conclusion, the water cycle serves as a fitting analogy for co-reflection in the co-teaching contexts in this study. Like the water cycle, co-reflection ensures a continuous supply of valuable resources for teachers, leading to abundant teaching strategies, improved teaching quality and better student outcomes. By embracing the co-reflection process and by working together, stakeholders in these contexts supported each other in their teaching efforts and fostered a culture of collaboration and continuous improvement.

Furthermore, the sense-making and co-construction model favoured by Datnow and Park (2009) highlights the importance of recognising change as a multi-directional process that arises from both internal and external forces within the education system. Teachers in the rural, regional and remote areas of this study navigated these complex dynamics, adapted to new challenges and drove positive change in their educational communities by engaging in co-reflection. Finally, the water cycle analogy effectively captures the essence of co-reflection in co-teaching contexts, particularly in this rural, regional, and remote setting. The cyclical nature of both the water cycle and co-reflection emphasises the importance of continuous learning, collaboration and adaptation in education. Teachers learnt from one another by engaging in co-reflection, improving their learning and teaching processes, and ultimately creating a more nurturing and supportive learning environment for their students.

### *6.5.1 Effective System-Wide Communication*

Another recurring theme that emerged from the perspective of both school and system leaders was the importance of effective communication that led to knowledge sharing throughout the Strategy. Due to the small size of the Diocese, the potential for developing effective communication and knowledge sharing was as yet unrealised but required galvanising. As previously discussed, effective system-wide communication had begun to occur with emergent dialogue occurring between school and system leaders regarding the Strategy. Later, the effectiveness of this communication was further enhanced through Principals Meetings, attendance at conferences, and CPLC meetings. As a result of these highly effective communication strategies, the school and system leaders became more sharply focussed on the pursuit of learning, teaching, and student wellbeing outcomes, and the schools came to acknowledge that they had the tools to be able to achieve the desired school improvement outcomes.

An example of the existence of this effective communication between the system and school leaders is indicated in the following reflection provided by a system leader when

describing their intimate involvement with one of the schools with which they were assigned to work:

> We worked with the school on co-designing school improvement processes, and we went out to [this school] for two days. On the first day, we are in classrooms, and we are teaching. We are taking small groups; we're doing guided reading. We were getting an understanding of where the students are at with their learning and teaching outcomes. The next day we co-designed the process. We were having deep conversations. We used the data ecosystem, and we started to deep dive into the data. We looked at the school's strengths, we analysed the data, and the schools were able to vocalise what the data says about our teaching program and strategies. [#5, system leader]

Furthermore, this commitment to the development of highly effective channels of communication allowed school and system leaders to seek assistance, clarification and input if the need arose. This level of open communication allowed knowledge sharing to overcome the complexities often inherent in improvement processes in rural, regional, and remote schools caused by physical and professional isolation.

The pivotal result from this effective communication and knowledge sharing was the enrichment of the conversations around school improvement with respect to learning and teaching. Previously, such communication was focussed narrowly on compliance and NAPLAN scale scores and NAPLAN assessment scales. NAPLAN is an annual nationwide assessment for students in Years 3, 5, 7 and 9 through which, it is generally argued, parents, teachers, schools, education authorities, governments and the broader community can determine whether or not young Australians are developing the literacy and numeracy skills that provide the critical foundation for other learning (Trimble, 2021). These tests provide an important contribution to monitoring and evaluating the performance of schools and school systems in these fundamental capabilities.

But, in the case of the school improvement strategy in focus in this study, as the communication and knowledge sharing became more focused and effective, this communication changed to exploring the drivers of NAPLAN scale scores such as the literacy block and guided reading. The primary influences upon this shift in communication were the professional conversations of the Instructional Leadership Team:

> The conversations in CPLCs *have to be data informed*. Usually it's reading, sometimes writing, focus. Obviously with our NAPLAN results coming out soon, we'll be focusing on those. But that's where are these kids at? What can we do to move them along? It's really important to come together and work on that data and have – just be aware of the data, and for them to check in and take responsibility for the kids' learning. [#7, school leader; emphasis added]

Historically, there was no sense of open and inclusive communication within the Diocese because the system was seen as bureaucratic and concerned with compliance and a "tick a box" approach to meeting expected accountabilities. As one principal recounted their past efforts of system leaders trying to engage with principals in school improvement,

> … we had a system-based approach. It would be similar to [a metropolitan Diocese], similar to the school review and improvement processes, but my criticism of that is it always becomes a ticker box approach. It was about compliance. [#2, system leader]

One of the reasons that the system leaders may have been ineffective in the past with school improvement was their being perceived as being too far removed from the classroom as a result of the size of the system. Hence, one participant described the result of system leaders being closer to the classrooms and, thereby, having greater impact on the classroom, in the sense that system leaders "are talking about reforming and improving schools from the classrooms rather than from the system level down" [#11, school leader].

An important part of the communication strategy was enabling the schools to advocate uniformly for a strength-based language that focussed on a commitment of respect and care for students. By using a strengths-based language, all leadership teams were able to engage with the new Strategy and understand the importance of each of their roles in the new school improvement Strategy. This change in the conversation led to action founded on a strengths-based rather than a deficit-based approach which developed trust and promoted two-way dialogue. More specifically, the conversation around school improvement planning enabled school and system leaders to engage in richer dialogue with the following key questions being explored, as noted in the fortnightly Diocese's e-Bulletin:

- What is your area of greatest positive influence?
- What is your evidence of impact?
- What are your greatest leadership challenges for next year?
- How can the system assist you to address the leadership challenges?
- How will this proposed support improve conditions of leading, learning, teaching and wellbeing? (Diocesan Office, 2020, n.p.)

Subsequently, these questions encouraged school leaders to engage in dialogue, self-reflection, and the sharing of knowledge as a partnership between schools and the system. Thus, these questions engendered system-school connectedness which improved the professional relationships and, ultimately, increased professional responsibility and commitment. The achievement of this relational connectedness led to effective dialogue and communication whereby a dialogue about school improvement could naturally and non-judgementally occur through having clearly defined key questions that enabled each school to identify their strengths and areas for improvement around meeting the Strategy's desired outcomes.

Furthermore, the previously described Instructional Leadership Teams inclusive of both school and system leaders were encouraged to further expand their understanding of schools by engaging in dialogue with teachers about how the teachers wanted to work:

> We wanted to disrupt the whole notion of teachers as silos and working individually. They – the teachers here were open to that. They could see the benefit of it. But there was – and they had started – while we were still building, they had started to work together in teams, and there were some arrangements for co-planning in RFF [relief from face-to-face teaching] and things like that. So, we just took it – we took what we were doing to the next level. So, loosely based on Lyn Sharratt's co-teaching cycle. [#5, school leader]

These perspectives largely reflect apprehensions regarding the quality of school performance data within the Diocese. The onus of the school improvement efforts fell on system leaders, driven by the necessity to imbue positive knowledge, skills, behaviours and attitudes. Ultimately, it was about embedding these attributes through developing capabilities in school leaders and teachers that resulted in an improvement in learning and teaching outcomes, with an emphasis on using school performance data. This ethical purpose is also endorsed and

validated in many work pack documents, AIPs, and briefing papers. One Diocese briefing paper described how:

> School Review and Improvement processes place much emphasis on system and school data. Our results focus on individual classroom data that provides feedback on student learning outcomes and teacher effectiveness. We are working towards a culture where we triangulate the 'Big Data' (e.g., NAPLAN) at the school and system level with the 'Small Data' of the classroom (assessment: formative and summative) and local culture and context. This triangulation considers all the data together. The 'why' questions the data raises at the local school level will inform strategic planning for school improvement. School-level planning will benefit from the feedback provided by our collaborative analysis of the Big Data. (Diocesan Office, 2019, p. 23)

Having school and system leaders driving the school improvement agenda required system leaders to not only build critical alliances within schools and across the system but also to ensure uniformity. It was deemed essential for the success of the strategy that each school's approach to its school improvement plan was founded on common criteria.

To this end, there was a growing awareness that using data to lead learning was to be the essential unifying criteria. Developing the confidence and capacity of each school's leadership team to guide their staff's best use of student learning data became the means for aligning school improvement across the system. Thus, a very significant part of the Strategy involved school and system leaders ensuring that using data to improve learning and teaching was embedded in all school and system leaders' professional learning rather than it being an exception. The following section describes how this encounter unfolded.

### 6.6 Analytical Summary

In summary, the collaborative process of co-teaching in the Diocese was comparable to the water cycle with respect to the various stages of co-teaching paralleling aspects of the water cycle. Just as the water cycle maintains balance and sustains life on Earth, the co-teaching process supports improving education in challenging settings by fostering a collaborative and supportive environment. The co-planning stage can be likened to the iteration process in the water cycle. During co-planning, teachers work together to develop shared learning goals and design learning and teaching processes to meet the needs of all students. This iterative

process is essential in refining plans and adapting to the dynamic educational landscape, similar to how the water cycle constantly renews and replenishes water resources. The co-teaching stage parallels the interconnectedness of the water cycle. As teachers execute their plans and make necessary adaptations, they rely on the collaboration and support of their colleagues to provide an effective learning experience for their students. This interconnectedness is akin to the various stages of the water cycle, which work together to maintain a balanced and healthy ecosystem.

The co-debriefing stage can be compared to the collection and monitoring aspect of the water cycle. Co-debriefing allows teachers to reflect on their practices, receive feedback and adjust to improve future learning and teaching. This continuous monitoring and assessment are essential for maintaining the health and effectiveness of the teaching process, just as monitoring the water cycle ensures the well-being of our environment. Finally, the co-reflection stage is analogous to the abundance and quality of a well-functioning water cycle. When teachers engage in co-reflection, they assess their teaching practices and collaborate with others to address challenges, share successes, and learn from one another. This process fosters a culture of growth and continuous improvement, leading to an abundance of quality teaching strategies and improved student outcomes.

In essence, co-teaching success relies on its practitioners' continuous collaboration, learning and adaptation, just as the water cycle depends on its interconnected stages to maintain balance and sustainability. By embracing the practices of co-planning, co-teaching, co-debriefing and co-reflection, teachers, school leaders and system leaders ensured a well-rounded and effective teaching experience that supports the success of their students.

The exploration of co-teaching within rural, regional, and remote contexts, as illustrated through the water cycle analogy, reveals profound implications for enhancing educational strategies in these unique environments. This model's success underscores the importance of fostering deep-rooted collaboration among educators, a principle that is especially vital in areas where isolation and resource limitations can impede traditional educational approaches. The emphasis on co-planning, co-teaching, co-debriefing, and co-reflection not only cultivates a supportive network among teachers but also aligns with the necessity for adaptable and resilient teaching practices that can thrive despite geographical challenges. For communities in these regions, the co-teaching framework offers a pathway to building a robust educational ecosystem that leverages the collective strengths and insights of educators to improve student learning outcomes. This approach, deeply interwoven with the community's fabric, champions a culture of continuous professional growth and shared

responsibility. By embedding these collaborative practices within their educational framework, rural, regional, and remote schools can create a nurturing and dynamic learning environment that supports both teachers and students in achieving their full potential, thereby contributing significantly to narrowing the educational divide across diverse landscapes.

## 6.7 Chapter Summary

This chapter has illuminated the processes and overall approaches that have been undertaken within the bounds of the Strategy, from the relationships between school and system leaders through to the concept of the data ecosystem and finishing with the school improvement processes. This chapter includes discussions around the key relationships between school and system leaders that allowed the Strategy to operate and progress, and the opportunities seized to coexist within wider advancements in school improvement, have been prominently emphasised in this chapter. The chapter has included the co-designed process the Diocesan leadership team implemented and its language with stakeholders, including school and system leaders and teachers working within the schools. This co-designed process resulted in the Strategy rolled out by the school and system leaders. This has highlighted how processes can be situated within the context of the previously discussed literature, especially with respect to the importance of people, data, processes, and school improvement ecosystems. These school improvement processes focussed on engaging with networks of school and system leaders working together to ensure consistency of language and processes supported teachers and students at the heart of the school improvement agenda.

# Chapter 7

## 7.1 Introduction: (Macro) Leadership Processes

This chapter explores the school improvement ecosystem within a rural, regional, and remote Diocese by considering the (macro) leadership processes contributing to the Strategy. To provide a visual representation of the leadership components at the macro level, Figure 7.1 illustrates each the four phases of the *Plan, Do, Check, Act* cycle. This figure will serve as a guide for understanding the interplay between teachers, school leaders and system leaders within the school improvement ecosystem.

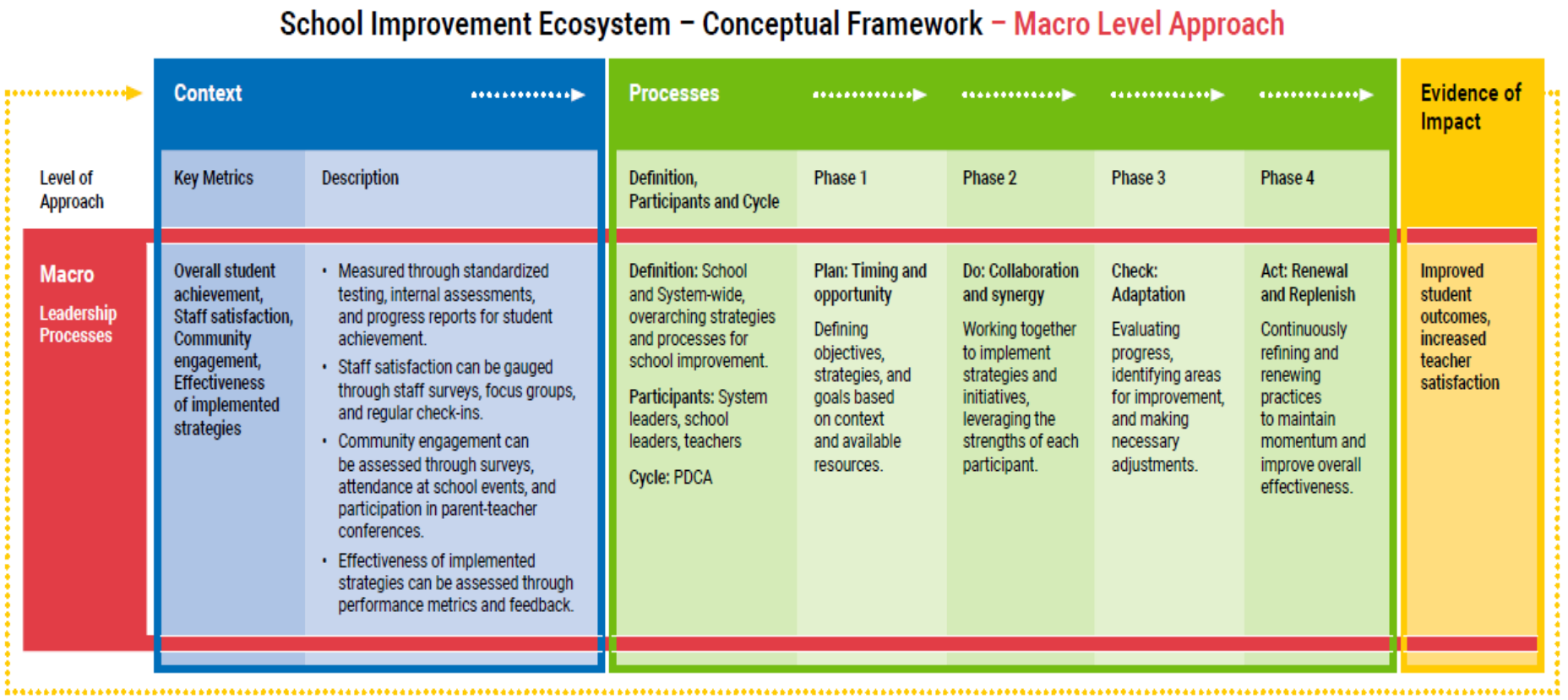



**Figure 7.1**: *Macro Level Approach to the Conceptual Framework*

**Note on Figure 7.1:** This figure is my own analytical creation, devised to offer a macro-level perspective on the leadership processes within the school improvement ecosystem. It visually breaks down the Plan-Do-Check-Act cycle, illustrating the dynamic interactions among teachers, school leaders, and system leaders. This visual aid is intended to clarify the complex, cyclical nature of leadership actions that fuel school improvement, drawing parallels with natural cycles to highlight the iterative process of planning, implementing, evaluating, and refining educational strategies. By presenting these leadership processes in this format, I aim to emphasise the critical role of

integrated leadership efforts in driving sustainable improvement and fostering a culture of continuous development within the educational ecosystem of rural, regional, and remote Dioceses.

First, beginning with the *Macro: Plan* component, the section examines the role of school and system leaders in leveraging the energy of timing and opportunity to initiate the planning phase. School and system leaders defined the objectives of the Strategy based on the context and available resources, ensuring a strong foundation for the improvement process. Second, *Macro: Do* represents the collaborative efforts of school and system leaders in implementing the established plans. Just as water vapour condenses to form clouds, the power of collaboration and synergy manifests as teachers, school leaders, and system leaders work together towards a common educational goal. This phase embodies the coalescence of ideas and actions within the school improvement ecosystem. Third, the *Macro: Check* component emphasises the importance of careful evaluation and progress monitoring. Like precipitation in the water cycle, this stage allows for the identification of areas for improvement and adaptation within the school ecosystem. Insights gained during this phase fed into the refining process, (re)shaping the future Strategy and ensuring continuous growth. Finally, the *Macro: Act* component aligns with the infiltration stage of the water cycle, where water renews the earth's reservoirs, preparing for the next cycle. Similarly, the school improvement ecosystem underwent a process of renewal and replenishment. Commitment to students and teachers was renewed, and resources were replenished, ensuring the continuous and sustainable progress of the school improvement ecosystem.

By examining each of these four components in turn within the macro (leadership) level of the school improvement ecosystem, this chapter specifically focuses on exploring the leadership processes that help contribute to the success of the Strategy. The cyclical nature of *Plan-Do-Check-Act* emphasises the continuous and dynamic nature of school improvement efforts, as well as the interconnectedness of teachers, school leaders and system leaders within the ecosystem. Namely, to achieve success in school improvement, a comprehensively integrated Strategy was needed, which required careful consideration of factors such as timing, opportunity, and leadership.

### *7.1.1 Macro: Plan: Timing and Opportunity*

As the first step in the Plan-Do-Check-Act cycle within the macro level, this section explores the factors that contributed to the comprehensive school improvement strategy in the Diocese. Emerging from the outcomes generated by the data analysis process, timing and opportunity were highlighted as key factors to providing the catalyst for school improvement via leadership. Implementing a comprehensive strategy across over 20 regional, rural, and remote schools was a central focus of the school improvement ecosystem, driven by the

vision of the new Director. Katila and Mang (2003) explain that an optimal moment or circumstance could lead to achieving a particular goal or outcome when combined with a suitable catalyst. In other words, timing, opportunity, and the catalyst of a new Director created favourable conditions for successful change. As Masters (2016) argues, recognising and taking advantage of these factors was a valuable achievement in the school improvement strategy, which meant that success was defined early for the teachers, school leaders and system leaders.

### *7.1.2 Fostering Collective Efficacy: Beyond Individual Achievement*

The achievements at the individual (meso) school level set the stage for a broader and more systemic approach. While individual catalysts such as a new Director can spark significant changes, the long-term success and sustainability of 'systemness' relies on a macro perspective, in terms of system leadership providing the necessary coordination and coherence across the system. This perspective encompassed collective efficacy, where leadership processes and strategic cycles come into play (Hargreaves & Ainscow, 2015; Hargreaves & Fullan, 2012; Fullan, 2015). For instance, the successes achieved by individual schools helped serve as a foundation upon which larger and more overarching strategies could be built systemically, ensuring that the growth was not just temporary but could be sustained and scaled.

At the macro level, the focus centred primarily on leadership processes and the strategic Plan-Do-Check-Act cycle, in which setting overarching goals, formulating the Strategy and allocating resources to areas in need of improvement were most emphasised. School and system leaders then bore the responsibility for nurturing an environment that fostered growth and development. As system leader #1 reflected,

> … we are now in a stage where schools are not only embedding these understandings, but looking for ways to set targets that will further enhance student learning and teacher capacity. The increasingly sophisticated use of data to identify areas for growth and measure improvement is adding value to school plans. [#1, system leader]

It was at this macro level where the vision and mission of the school were articulated and aligned with the educational strategies and practices, effectively guiding the direction of the school's improvement journey.

In the planning phase, strategic alignment and systemic coherence were identified as pivotal, as evidenced by the predominance of 'People' (n=235) and 'Systemness' (n=87) within the thematic analysis. This aligns with extant literature that emphasises the organisational ecology and interconnectedness of relationships in school improvement (Branson & Marra, 2022; Haffar & Searcy, 2018; Katz & Kahn, 1978). Methodologically, the frequency count was derived from a systematic coding of qualitative data, with the PDCA cycle adopted as an analytical framework due to its iterative nature and suitability for educational setting (Leslie, 2020). Each phase of the cycle was rigorously examined by the researcher against the backdrop of the Diocese's strategic objectives, revealing a proactive approach characterised by the implementation of evidence-based instructional leadership practices. However, the findings also suggest areas for further refinement, particularly in the 'Check' phase, where the theme 'Evidence Of Impact' (n=70) indicated a need for more robust evaluative mechanisms.

Enhancing the PDCA cycle was crucial, especially when considering that one of the primary system health indicators in the data ecosystem is student academic achievement. The Diocese was able to measure this by using standardised testing, internal assessments and progress reports. By analysing these longitudinal data points, school and system leaders were able to identify trends and patterns in student performance, enabling them to target areas requiring improvement and, at the same time, celebrate areas of success. In addition to academic achievement, school and system leaders considered student well-being, as this was seen to have a direct impact on student's ability to learn and succeed in the classroom. Key metrics at this level primarily included overall student achievement, staff satisfaction, community engagement and the effectiveness of implemented strategies. The assessment of student achievement provided insights into the overall educational effectiveness of the rural, regional and remote Diocese, indicating the success or failure of particular elements of the Strategy. In the data ecosystem, high staff satisfaction reflected the well-being of the teachers and school leaders, whose contentment and motivation directly influenced the quality of education. Research has shown that teacher well-being can have a direct impact on student performance and overall school success (Collie, Shapka, & Perry, 2012). Ensuring staff members were supported and engaged in their work contributed to a positive school environment, which in turn positively influenced student outcomes. To measure staff satisfaction, schools and system leaders in this case study used surveys, focus groups and regular check-ins to gather feedback on staff members' experiences and to identify areas for

improvement. The effectiveness of implemented strategies provided a direct measure of the success of the PDCA cycle in achieving the diocesan mission and goals.

In addition to these primary indicators, schools and system leaders also considered other factors that contributed to the overall health of their school improvement ecosystem. These indicators included the availability and quality of resources, the effectiveness of professional learning and the degree to which the Strategy was communicated and understood by all stakeholders. Parental and community engagement was another crucial system health indicator. Schools that maintain strong connections with parents and the wider community are more likely to create a supportive learning environment for their students (Epstein, 2001). Within the data ecosystem, school and system leaders were able to assess parental engagement through surveys. By fostering these strong relationships with parents and the community, school and system leaders worked collaboratively to address issues and provide additional support to students in need.

### *7.1.3 Macro: Do: Collaboration and Synergy*

Participants in this study emphasised the importance of collaboration and synergy in overcoming challenges specific to this Diocese, such as educational disadvantage, geolocation and lack of access to specialised expertise. During the second stage of the plan-do-check-act cycle, the Diocese focused on the scalability of teams and processes within individual schools and the Diocesan Office. The schools worked on assembling strong teams that could function effectively within the context and identify critical scalable tasks and processes. Establishing such scalable structures and processes aimed to enhance operational efficiency and the ability to adapt to scale-related changes in the educational ecology of the Diocese.

In this second stage, school and system leaders focused on implementation, which encompassed enacting plans for scalability. From the data analysis of participant interviews and documentary evidence, six key ‘do’ themes emerged: *i)* relationships, *ii)* principal buy-in, *iii)* research, *iv)* organisational learning, *v)* classroom focus (particularly in literacy and numeracy), and *vi)* the role of Leaders of Pedagogy. Notably, cultivating relationships was paramount to ensure alignment between teachers, school leaders and system leaders towards the common goal of scalability. These healthy relationships meant that principal engagement and decisions guided by the research were crucial components of a scalable implementation of this stage of school improvement. Moreover, the data identified that collective learning, a focus on classroom-specific improvements, and the introduction of Leaders of Pedagogy all

contributed to a scalable school improvement strategy. For instance, system leader #5 encapsulated this sentiment when they asserted that "strong teams enhance learning and teaching. We know that our motto is: Literate and numerate students for a hope-filled future". Understandably, these collaborative efforts allowed schools to leverage resources and expertise effectively to address their unique challenges.

During the interviews, multiple school leaders suggested that implementing the Strategy was hindered by a multitude of challenges, such as droughts, floods and the COVID-19 pandemic. And yet, despite these difficulties, the interview responses demonstrated that effective collaboration and synergy were able to both continue and thrive. That these school leaders could continue their progress with the Strategy despite these challenges was arguably due to the introduction of CPLCs. This is perhaps not surprising, since the Australian Institute for Teaching and School Leadership (AITSL) has noted the effectiveness of Professional Learning Communities (PLCs) when they are learning-orientated and promote the growth of both teachers *and* students (AITSL, 2020). Participants noted that, in response to droughts, floods, and COVID-19, school and system leaders became more collaborative in their efforts to foster professional growth, despite the obvious challenges. This synergy occurred through the CPLCs and other collaborative efforts, the school system improved productivity, decision-making, problem-solving, and communication skills, thereby creating a more sustainable education system.

Over the two years of the Strategy's implementation, participants could readily identify effective leadership as crucial, particularly around fostering teacher collaboration. As system leader #2 succinctly captured, "clear learning goals, data-informed teaching approaches for each student, professional development, and teacher collaboration – *these are the pillars of our school improvement vision* in the Diocese" (emphasis added). School and system leaders utilised various strategies to foster a collaborative culture among teachers, staff, and other stakeholders. Illustrating this point, the introduction of the Strategy established new rules and standards, which reshaped the processes within the Diocese. In the 'Do' phase, the enactment of the planned strategies is reflected in the emphasis on 'Instructional Leadership' (n=60) and 'Teaching' (n=54). These themes signify the Diocese translating strategic plans into concrete processes. Moreover, the frequency with which 'Research' (n=57) is mentioned indicates a data-informed approach to the Strategy. The 'Do' phase's fidelity to the implementation of strategies is crucial, as it directly influences classroom experiences and pedagogical outcomes. The interview data with school and system

leaders suggests that the Diocese has embraced a school improvement journey that is focussed on improving the conditions of the classroom.

The Non-Negotiables became newly embedded into standard ways of working, and the Plan-Do-Check-Act cycle served as a useful analytical frame to understand the process of implementing change and improving outcomes during the Strategy. Influential leaders successfully carried out the "Do" stage of the cycle: implementing planned interventions or changes, effectively communicating, providing clear expectations, and supporting teachers and staff. CPLCs and cross-functional teams were effective strategies for promoting collaboration and synergy during this stage. As described in Chapter 2 of this thesis, and after Barber and Mourshed (2007) and Mourshed and colleagues (2010), system-led collaboration is vital in school improvement efforts.

It is worthwhile detailing here just how integral CPLCs were to the successful implementation of the Strategy within the Diocese. CPLCs provided a forum for teachers to collaborate and share knowledge and expertise, ultimately improving teaching practices and supporting student learning, especially when using the data ecosystem. In the documentary evidence, it was also evident how Instructional Leadership Teams played a crucial role in uniting teachers, school and system leaders from diverse schools and areas of expertise. The CPLCs collaborated on specific initiatives, including the design workshops that helped to build the data ecosystem. Ultimately, the CPLCs was instrumental in fostering innovation, nurturing creativity, and enhancing student outcomes. Participants also noted that effective school and system leaders were flexible and adaptable during the "Do" stage, responding to unexpected challenges and making adjustments as needed.

As part of the Strategy, stakeholders also utilised technology tools – including the data ecosystem – to facilitate remote collaboration and inquiry among teachers, school and system leaders. The data ecosystem proved particularly valuable in this Diocese, where geographic distance created considerable barriers to collaboration and communication. One participant captured ably this sentiment:

> The focus has certainly changed… directing the money into what the kids need as opposed to what the teachers need to improve and build capacity to improve teaching right across… *The data ecosystem is a line of sight into school improvement in teaching and learning*… The system supports are seen that, but then also not only ask but not all the schools in the Diocese is it real systemness around reaching that improvement in teaching and learning. [#5, school leader]

In summary, effective leadership at the Macro: Do level in this Strategy required a focus on collaboration and synergy. The *Do* stage was useful in describing some of the key practical steps that were utilised through this time. Furthermore, by establishing CPLCs, instructional leadership teams and utilising the data ecosystem, school and system leaders promoted collaboration and innovation, broke down silos and improved student outcomes. Flexibility and adaptability ensured that implementing planned interventions addressed fidelity and unexpected challenges. Effective collaboration and synergy enabled this system to leverage its resources and expertise, creating a sustainable ecology for high-quality education.

### *7.1.4 Plan as Part of a Comprehensive Strategic Process*

When pressed for a personal explanation as to why the participants felt that they considered the Strategy to have been successful, unlike previous efforts at school improvement, a common impression was that a comprehensive strategic plan was at the heart of this achievement. Arguably, it was the comprehensive nature of the strategic plan, rather than any specific element, that provided the participants with this favourable impression. Informed by data aligned with this common impression, this section describes those features of the Strategy that were perceived by the participants as achieving comprehensiveness. These features were those of comprehensiveness, coherence, co-design, non-negotiables, and review, and I will now address each of these in detail.

### *7.1.5 The Comprehensiveness Feature*

Significantly, the comprehensiveness of the Strategy was its unequivocal focus on processes that could lead to evidence of impact on student learning, thereby ensuring that all staff were aware of and supported the enactment of the Strategy. In concrete language, this was described by participants in a variety of ways:

> Systemness is *first about relationships*: it is about relationships of the Principal and their team with the CSO, and relationships between the schools in the system. [#3, system leader; emphasis added]

> We do have money to really put towards resourcing our *vision* and our annual improvement plans and our *school improvement roadmap*. [#8, school leader; emphasis added]

> Over the last couple of years, we've tried to build a *project management culture* into our culture. Which – so we can clearly articulate at the office level of what our goals are, what our milestones would be, what the timelines are and how we will evaluate the success of the project and knowing what that looks like from the beginning of the project. [#1, system leader; emphasis added]

At the heart of the Strategy's comprehensiveness, and arguably of particular importance, was its achievement of a common vision, which is illustrated in Figure 7.2 and adapts a slide provided in a Director's presentation at the Principals Meeting (2021). This provides a summary of the school improvement roadmap utilised for developing the Strategy, which emphasises the comprehensiveness of the Strategy through its designated interconnections of the AIP, AIP implementation plan, Professional Learning Plan (PLP), School Improvement Roadmap, Work Packs, and the integration of these respective elements within the Strategy. Also, this figure provides a clearly defined alignment structure around the Non-Negotiables (described in Chapter 6.3.2) and the relationship between teacher and student in the literacy block throughout the five-year Strategy.

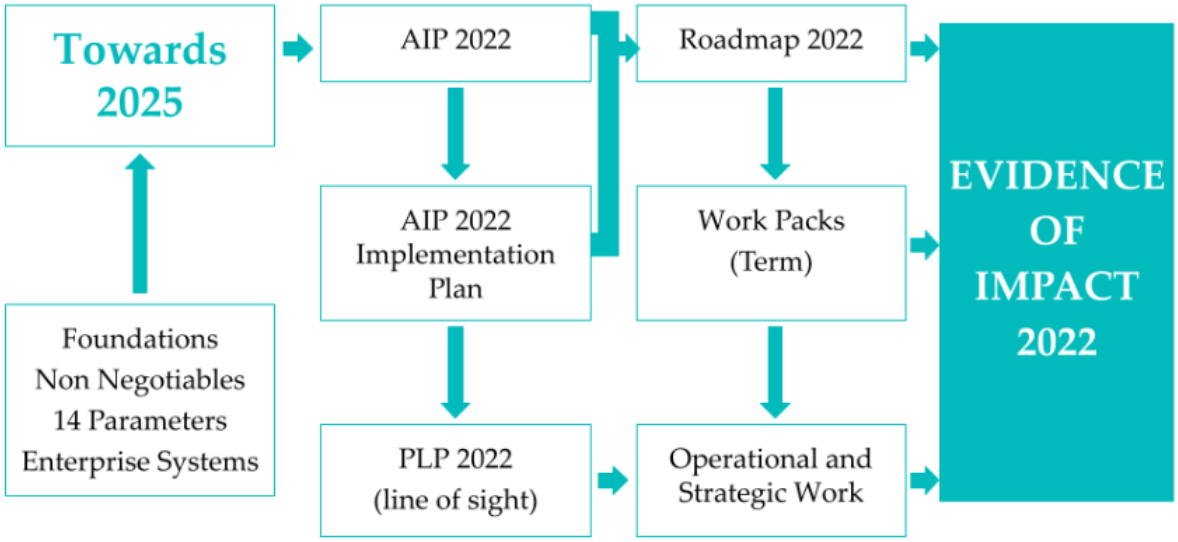



**Figure 7.2***: Director's Presentation*

Abbreviations: AIP = Annual Improvement Plan; PLP = Professional Learning Plan. Source: Director's Presentation, Principals Meeting, 2021.

**Note on Figure 7.2:** This figure reproduces a slide from the Director's presentation at the 2021 Principals Meeting, serving as a crucial artifact within our school improvement strategy documentation. It succinctly captures the Strategy's framework, detailing the integral components such as the Annual Improvement Plan

(AIP), Professional Learning Plan (PLP), School Improvement Roadmap, and Work Packs. Additionally, it illustrates the alignment with the Strategy's Non-Negotiables and the pivotal teacher-student dynamics within the literacy block. Presenting this slide here allows for a direct insight into the structured approach advocated by the Diocese's leadership, highlighting the comprehensive planning and interconnected processes envisioned to foster educational excellence. Its inclusion offers transparency into the strategic planning endorsed at the systemic level, providing a visual summary of the cohesive efforts undertaken to achieve a unified vision for school improvement across the Diocese.

This school improvement roadmap encapsulates a 'rhythm of the school year' view of school improvement processes that can improve learning, teaching, and wellbeing outcomes. As one School Performance Leader described,

> … the 'rhythm of the school year' was a term that we used quite often as SPLs [School Performance Leaders]. It was a statement about the disruption that we saw occurring in schools. With the introduction of Non-Negotiables and schools taking on the literacy blocks, PLTs [professional learning teams] and benchmarking processes. We could see how the calendar of the school year could be different. *The calendar was no longer focused on fetes and show work but a relentless focus on learning and teaching*. [#5, system leader; emphasis added]

The school improvement roadmap provides the most insight into the 'rhythm of the school year' for this particular Strategy because it uses the calendar year to highlight problems, root causes and solutions that lead to insight and actions that have evidence of impact.

An additional acknowledged asset embedded in this roadmap was the criteria used to ensure system-wide alignment through the introduction of the concept of a *Work Pack*. Creating the Work Pack aligned the school improvement goals and the Strategy. The definition of the Work Pack was:

> …a group of related tasks within a project. Because they look like projects themselves, they are often thought of as sub-projects within a larger project. Work pack are the smallest unit of work that a project can be broken down to when creating your Work Breakdown Structure (WBS). (Catholic Schools Office, 2019, p. 3)

Furthermore, the school improvement roadmap shown in Figure 7.2 was based on a co-designed process between the system and the schools, which then became a powerfully

effective way to create alignment between both parties, especially when contrasted with the former method of an imposed, top-down approach. Instead of being centrally dictated for more accountability measures, the roadmap implementation focused primarily on the classroom, the relationships between students and teacher, and processes aimed at generating evidence of impact. This school improvement roadmap was thus a positive lever for change as it focused on evidence of impact, rather than purely compliance. Each of the six parts of the school improvement roadmap draws out multiple processes and evidence of the impact that then presents a richer insight into student learning. Also, through the inclusion of multiple processes it not only provided rigour but also gateways to the next part of the year. Moreover, this school improvement roadmap was grouped into a series of 8 Work Packs, as shown in Figure 7.3.

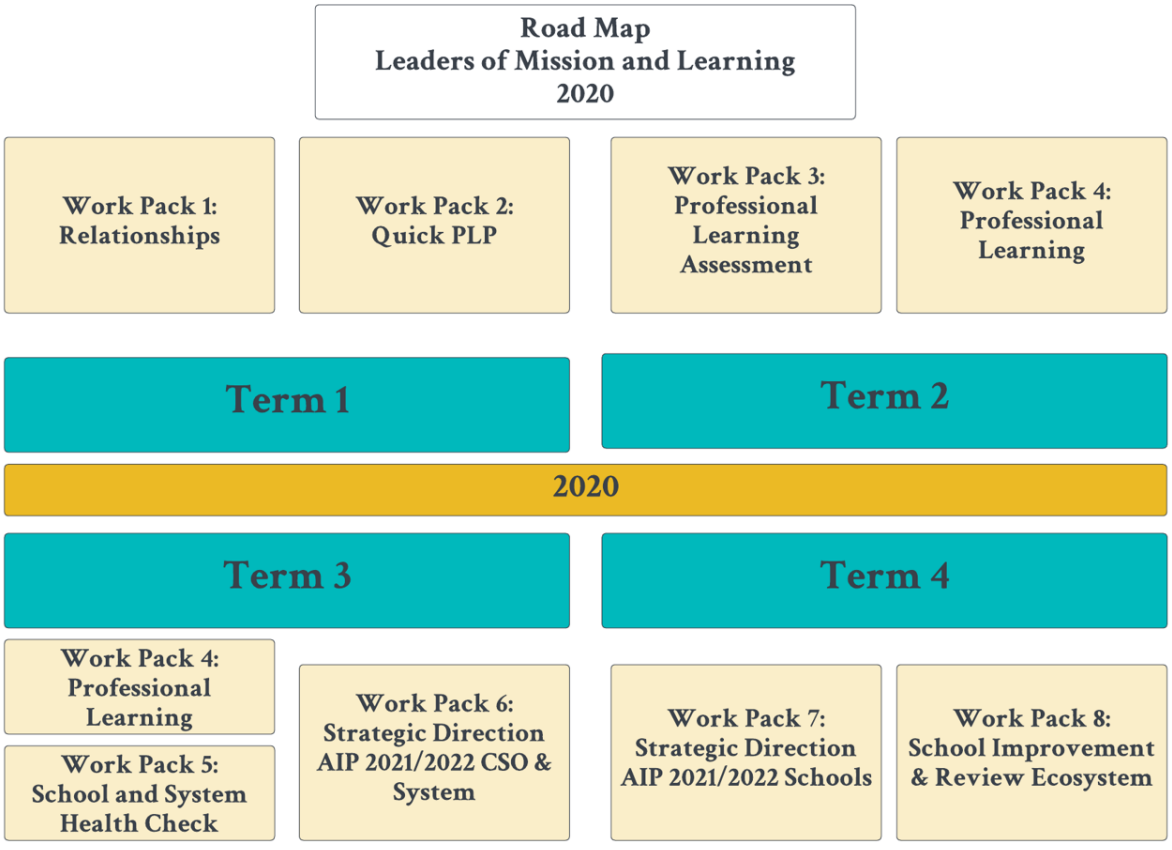



**Figure 7.3***: School Improvement Roadmap 2020*

Abbreviations list: AIP: Annual Improvement Plan; PLP = Professional Learning Plan. CSO: Catholic Schools Office.

**Note on Figure 7.3:** This figure is a direct visualisation from the 2020 School Improvement Roadmap, a system artifact developed collaboratively by the Diocese's schools and the Catholic Schools Office (CSO). It details the sequence and interrelation of Work Packs alongside the Annual Improvement Plan (AIP) and Professional

Learning Plan (PLP), highlighting the strategic initiatives aimed at enhancing teaching, learning, and wellbeing outcomes.

Furthermore, within each Work Pack, there were designated responsibilities and activities referred to as 'stage plans', which themselves served as internal planning, communications and quality management tools to support and assist in the successful execution and completion of the Work Pack and, ultimately, the individual school improvement strategies. More specifically, the purpose of these stage plans, as defined in the Work Pack documentation, was:

> … to identify all the steps of the stage for Work Pack 2: Quick Professional Learning Plan. In this stage plan, the stage plan is documented in detail how the School Performance Leaders will work with the CSO [Catholic Schools Office] Leadership team, MALT [Mission and Learning Team], Schools, and key external stakeholders in developing and embedding an informed, research-evidenced model of pedagogy, based upon the two-handled lever of school improvement, working in teams always, and developing teacher and leadership capacity. (Catholic Schools Office, 2019, p. 3)

It was also acknowledged that language would play a significant role in achieving diocesan-wide alignment. What emerged from school and system leaders' accounts was how the Strategy created a shared language and understanding around which the school and system could discuss key school improvement processes. Given the importance of a common language, it was perhaps not surprising that ensuring the appropriate language continued to be a key focus of the Strategy:

> That language was – has been embedded across the Diocese, really. So, it's something that's assumed here – that we are a professional learning community, and as such, it's data-driven, evidence-informed, and we work collaboratively for the kids to improve their results and their wellbeing, and improve practice, really. It's just the – we're on a path now where we, it's what's next? What do we do next? We're trying to embed that cycle of improvement, the concept of *continuous improvement* in our staff. [#5, school leader; emphasis added]

While previous sections have described the importance of stakeholder engagement in the Strategy, here it is in the form of an inquiry approach towards evaluating evidence, expertise, and experience, as informed by the international research literature. Therefore, 2020 saw the development of the Term 2 Subject Matter Expert Data Action Plan (see Figure 7.4), which covered the scheduling of several aspects of a Subject Matter Expert's termly schedule

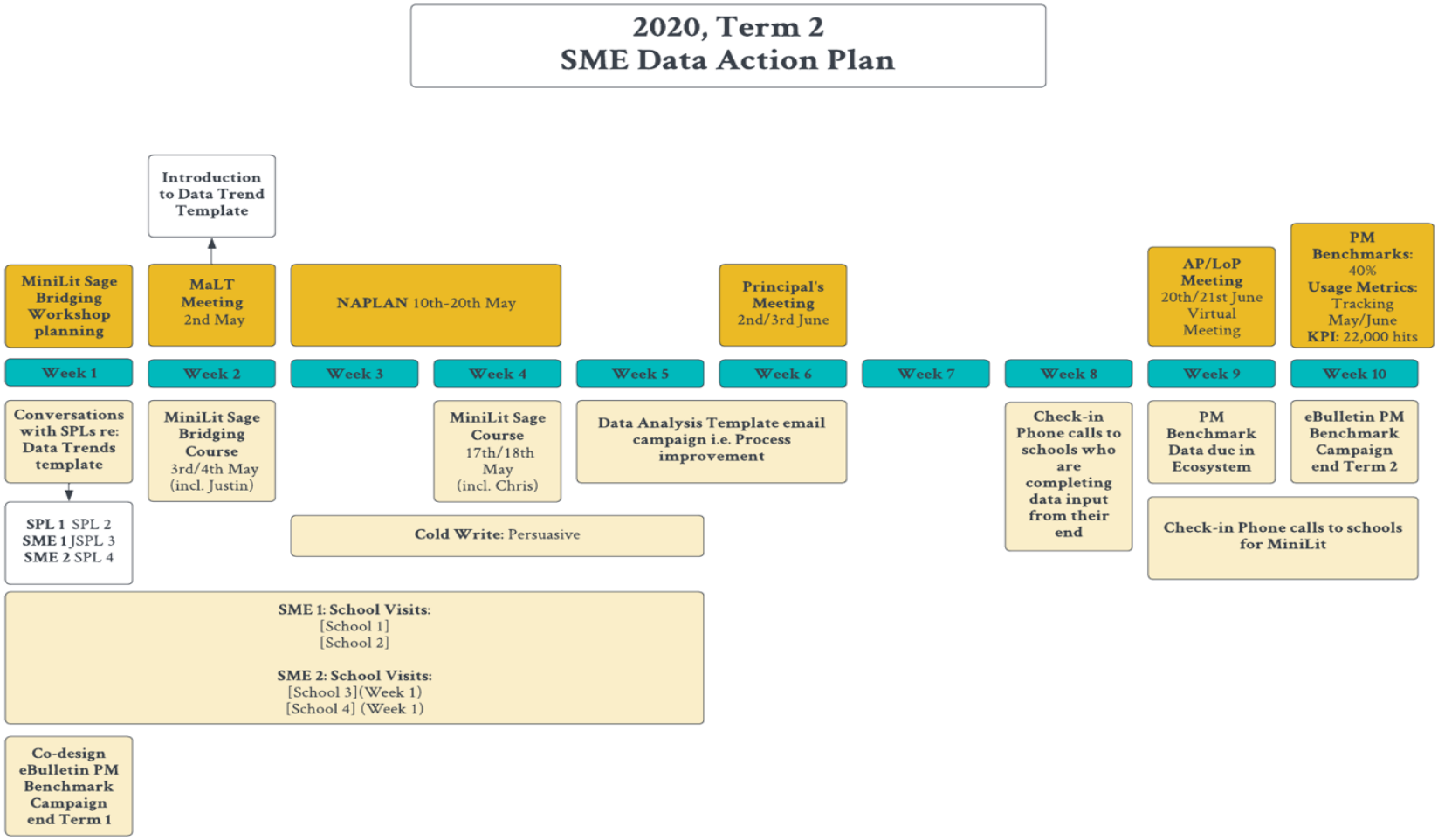



**Figure 7.4:** *2020 Term 2: SME Data Action Plan*

Abbreviations: KPI = Key Performance Indicator; MaLT = Mission and Learning Team; SME = Subject Matter Expert; SPL = School Performance Leader.

**Note on Figure 7.4:** This figure illustrates the Term 2 Subject Matter Expert Data Action Plan from 2020, a system artifact that outlines the operational and strategic activities scheduled for Subject Matter Experts within the Diocese. It encapsulates a range of work, from achieving reading targets to enhancing teacher capacity in data literacy.

This schedule was a mixture of strategic and operational work-type outcomes of continuous improvement work that contributed to reaching targets in reading and building teacher capacity in data literacy. Another revealing insight of this co-designed schedule was how milestones of submitting data to the system office created a common language around data and the next steps for school and system leaders. Figure 7.4 also illustrates how participants' approach to engagement, which is both iterative and inclusive, is interconnected with the central purpose of the project, as well as distinct windows of opportunity. The characteristics of the co-designed processes incorporated an engagement style that leveraged relationships. This approach utilised the shared beliefs and value of stakeholder viewpoints and influence, and it was bolstered by evidence of impact and the expertise of school and system leaders.

### *7.1.6 Achieving Comprehensiveness Through Coherence*

Central to the participants' understanding of coherence was the clear impression that nothing was being expected of schools that was not already happening in the Diocese's Catholic Education Office. Moreover, of especial interest to the participants was the understanding that this comprehensive plan had its genesis in the Diocesan's Catholic Education Office, rather than the schools. As previously described, a collaborative process for the development of a three-year strategic plan and an AIP was first implemented in 2015 in the Diocesan's Catholic Education Office and the resulting documented outcomes were distributed for display in each of its schools' staffrooms. This was an important modelling step, since it not only showed that the Diocesan's Education Office was already involved in an improvement strategy but it also, arguably, encouraged all school staff to become more involved in the system's future directions. The Diocesan's Education Office's School Performance Leaders then worked with individual school principals to help them develop their own individual AIP that was aligned to the three or four strategic pillars of the Diocesan's Education Office three-year Strategy. In this way, the basis of what would ultimately become the foundation of the school improvement strategy was being explicitly displayed, modelled and encouraged by the Diocesan's Education Office staff *with* and *within* schools. As such, there were no expectations on school personnel that were not already being engaged in by those overseeing the administration of the school system.

From 2016 onwards, this process of school AIP development, aligned with that of the Diocesan's Education Office, continued evolving to include school leadership teams sharing their plans with other schools, as well as an end-of-year evaluation of each school's AIP in peer cluster groups to assess its effectiveness. The school improvement strategy was being

coherently spread across the schooling system, rather than being imposed upon each school at a given point in time. As one participant described,

> … I think we should be really proud of the way our strategic planning process has matured over time. So, when we look back now, we can see how well our planning is done now compared with the way that we approached it even two or three years ago. [#5, system leader]

This system leader also argued that the benefits of the strategy were not solely gained from looking back to see all the improvements achieved, but they also provided a coherent means *looking forward*, and thus helping them prepare for the future:

> Making sure that we were *forward thinking* enough to have in our strategic planning that we were *thinking far enough ahead*, not just these 12 months, or the next three years, but what groundwork are we putting in now to make sure that we are developing a response to what we know will be a challenge in the *future*. [#5, system leader; emphasis added]

The appreciation expressed by these (and other) participants was due to the development of a coherent comprehensive Strategic plan. The school leaders perceived that system leaders assisted with building transformational connections through developing a better process that was not only inclusive but also practical and manageable.

However, it was similarly acknowledged by the participants that a planned strategy alone was insufficient to drive effective school improvement. Participants emphasised that adequate resources were also critical to facilitate the desired outcomes. The release of the federal government's Gonski review (2011) into school funding came at a fortuitous time for the success of this strategy. The new federal government funding model for Australian schools resulted in increased funding for the Diocese, and thus the ability to implement practical measures that would improve school performance became far more achievable:

> I think we're a lot better funded now than we were in the past, in my experience, and we seem to have well and truly enough funds to do what we need to do … especially with staffing. [#5, system leader]

Integral to this achievement of cohesion was the acknowledgement of the importance of school and system leaders working together to co-design and collaborate in the development, implementation, and evaluation of the comprehensive strategic plan. I will now turn to consider this next feature.

### *7.1.7 Macro: Check: Adaptation*

During the *Macro: Check* phase of the cycle, the Diocese evaluated the results of its efforts to improve student outcomes and identified areas for adaptation to better align with the Strategy. In this part of the cycle, school and system leaders within the Diocese jointly designed and implemented scalable strategies. Through a process of collaboration and shared decision-making, strategies were designed with scalability in mind, ensuring their suitability for different scales of operation within the rural, regional, and remote Diocese. A crucial aspect of this phase was reflection, facilitating iterative refinement of scalable strategies based on experiences from the initial implementation. Here, participants and documentary evidence supported the theme of reflection as crucial to monitor the scalability strategy's progress. Moreover, the importance of relationships persisted, with a focus on collaborative data analysis and evidence-based decision-making.

Indeed, enhancing data literacy amongst school and system leaders was seen as a key factor for understanding and applying these data towards scalable goals (Leslie, 2020; Gonzales, Bickmore, & Roberts, 2020; Harvard Graduate School of Education, 2023). This refinement of school improvement processes stood as a critical step in ensuring continuous progress towards scalability. This case study not only enriches Branson and Marra's (2022) analysis but also exemplifies a concrete school improvement strategy designed specifically for teachers, school leaders and system leaders. This adaptation process ensured alignment between the Diocese's broader goals and objectives of the Strategy and how connected it to the school improvement architecture, such as the diocesan implementation plans, the school improvement roadmap, work packs and professional learning plans. As mentioned previously, the data ecosystem became a central tool for school and system leaders to continuously monitor and adapt the effectiveness of the Strategy.

The 'Check' stage was characterised by a reflective examination of the outcomes stemming from the implemented actions. The analysis reveals a strategic focus on 'Evidence Of Impact' (n=70), indicating rigorous assessment practices to gauge the efficacy of the improvement strategies. The occurrence of 'Meetings' (n=52) and 'Dialogue' (n=20) within this phase points to the Diocese's commitment to collaborative evaluation and reflective

practice. This phase was critical for assessing progress and informing iterative cycles of improvement, aligning with evaluative frameworks advocated in scholarly discourse (Barger-Anderson, Isherwood, & Merhaut, 2013; Bernhardt, 2017; Boudett, City, & Murnane, 2013).

One particular area where adaptation was necessary was the Diocese's approach to improving student reading outcomes. During the Plan phase of the cycle, participants described how the system established a goal of increasing student reading proficiency by providing targeted interventions and support to meet students at their point of need to determine their next steps. As school leader #8 elaborated on increasing reading proficiency,

> … at the micro level, the recent development of our [...] Data Ecosystem using a Business Intelligence (BI) tool makes teacher use of reading data more accessible and enables teachers' instant visualisation of the data story, effectively informing *next steps*. (emphasis added)

The Education Office had implemented several interventions and strategies, such as a strong focus on literacy in the Non-Negotiables, the introduction of the literacy block, a focus on explicitly teaching phonics in tier 1, tier 2 and tier 3 interventions, and the consolidation of system results in the data ecosystem. Taken together, these were critical steps by the system to ensure adaptation occurred by schools to these systematic process changes across the Diocese. However, the Check phase results showed an ethical purpose for school and system leaders to further engage in improving reading outcomes.

During the Check phase, the Education Office collected data on student reading via one-on-one diagnostic assessments, the students' proficiency levels, and feedback from teachers and school leaders on the effectiveness of the interventions. Tellingly, participants spoke about how the data ecosystem revealed that students continued to make progress despite many still failing to meet the end-of-year benchmarks; as school leader #10 observed, "[The data ecosystem] has made visible those students who've grasped the strong concepts about print, who are ready to read, and importantly, who *still require further support* to meet the end-of-year benchmarks" (emphasis added). Additionally, the data showed disparities in reading proficiency levels among equity groups, such as Aboriginal and Torres Strait Islander students, Students with Disabilities (SWD) and gender differences. As demonstrated in diocesan documents collected over the time the Strategy was implemented, system leaders consulted with school leaders to pinpoint the structural disadvantage that occurred in the Diocese. The Check phase indicated to school and system leaders that there was a need for

more targeted and differentiated support to improve student reading outcomes. Based on these findings, the Diocese decided to adapt its approach to improving reading outcomes during the Act phase of the cycle, demonstrating the ongoing reiterative and recursive nature of the Strategy. The system began implementing more targeted and differentiated interventions based on individual student's needs and reading levels. The School Performance Leaders visited all schools across the Diocese and sought to enhance resources (teachers and/or school leaders) to address the challenges schools faced. Additionally, system leaders worked with school leaders and teachers to provide access to more detailed data on student reading proficiency levels.

The interviews highlighted several key actions taken by school and system leaders during the Check phase. One of the initial actions was an increased emphasis on utilising reading data to inform teaching practices. A school leader shared more detail about this systematic approach:

> Our professional learning team meeting, led by myself and the Leader of Pedagogy, forms the first hour of our day. It's a data-informed agenda, typically focusing on reading or writing. Our goal is to understand student progress and strategise ways to advance their learning. *It's vital that we collaborate on this data to ensure we're all invested in our students' success*. [#7, school leader; emphasis added]

Additionally, school leaders co-designed literacy blocks to provide extra teaching support during these critical learning periods. As one school leader articulated during an interview,

> … [i]n our Literacy blocks, we adhere to certain guidelines, referred to as the Non-Negotiables. We are implementing Lyn Sharratt's Gradual Release of Responsibility model. Within this model; it is co-designed. It incorporates shared reading, modelled reading, and guided reading within the literacy blocks. These literacy blocks are implemented across the entire school. [#9, school leader]

Finally, the introduction of learning sprints, or short, intensive periods of literacy instruction, was another key action. School leader #8, who had a particular interest in literacy, highlighted the effectiveness of this approach: "The introduction of learning sprints, a concentrated five-week literacy program, sharpened our focus on reading: phonics, fluency and comprehension skills. This intensive approach has notably elevated our students' reading

capabilities". Following these actions, a comprehensive review of the data ecosystem was undertaken by school and system leaders as part of a broader system health check.

During the Check phase, the student achievement data showed an improvement in the widely used Price and Milburn (PM) Benchmark levels to assess student reading accuracy, fluency, behaviour and comprehension. Greater consistency throughout the Diocese in terms of standardised testing resulted in higher quality data, with more students achieving the desired proficiency levels. The Education Office also received positive feedback from teachers and school and system leaders on the effectiveness of the targeted and differentiated approach. One school leader affirmed this strategy, stating that:

> … we've adopted a targeted intervention approach. It requires us to identify our leadership challenges and significant areas of need, and we allocate resources based on a needs-based funding model. This method aligns well with the government's equity approach. (#8, school leader)

Thus, this targeted and differentiated approach helps support Branson and Marra's (2022) argument that the development of high trust environment and actions "aid the development of sensemaking about the team's goals and functioning" (p. 104), resulting in school and system leaders who were responsive to external events and to internal transformations in the Diocese. This ultimately led to the attainment of school improvement; for example, the Director's connection and relationships with principals improved the buy-in of principals to embrace the Strategy.

In conclusion, how the data were understood and applied was instrumental in improving reading outcomes in the rural, regional and remote Diocese. By collecting data during the Check phase, the system leaders were able to identify areas where adaptation was necessary, and subsequently made appropriate changes during the Act phase to better align with its school improvement architecture. The adapted approach to improving reading outcomes, including targeted and differentiated interventions, proved successful in improving student reading benchmark levels and closing the gap between equity groups.

### *7.1.8 Macro: Act: Renewal and Replenish*

The final stage emphasised the scalability of continuous improvement processes and evidence of impact achievement within the Diocese. Teachers and school and system leaders engaged with the continuous improvement framework designed to adapt and evolve in response to changes in scale. Throughout the participant interviews and analysis of documentary evidence, it became apparent that iterative evaluation and enhancement of processes were seen as critical to achieve scalable learning, teaching, and wellbeing outcomes. This stage signified a particular commitment to a cycle of scalable improvement, where insights from process informed strategy refinement, enabling enhanced evidence of impact at various scales within the rural, regional, and remote Diocese. Moreover, this final stage dealt with executing changes aimed at scalability. The six major themes that emerged from the research were relationships; evidence of impact; learning, teaching and wellbeing outcomes; questions; resource allocation; and results. Once again, the ongoing focus on relationships signified their role in cohesive scalability efforts. The data ecosystem and gathering evidence of impact was essential to confirm that the scalability strategy was meeting its objectives. Evaluating learning, teaching, and wellbeing outcomes provided tangible proof of scalability. Moreover, addressing questions, allocating resources to address gaps, and tracking results were integral to a successful scalability action plan.

Hence, within the context of this study, the definition of the school improvement ecosystem is that it implies a cross-field collective form of systemic improvement. As such, a school improvement ecosystem incorporates stakeholders' (school leaders, system leaders, teachers, students and parents) knowledge, skills and behaviours, as well as the mutual relationships and structural factors that encompass an education system. Walker, Lee, James, and Ho (2018) outline the value of the ecosystem by identifying the most pressing external influences and the value pools through data, including stakeholders' perceptions, to analyse the complexity of organisations. In agreement with Walker and colleagues (2018), a school improvement ecosystem not only involves the quality of the people, including school and system leaders, but also significantly broadens to incorporate understanding and recognition of the interests and perspectives of parents, teachers, and students. Furthermore, it includes considerations such as unique values and ideals embedded in school improvement systems, such as, for example, Catholic Values.

It is worth noting here that the 'Act' phase is where adjustments based on the 'Check' phase's insights are integrated. Here, the Diocese's responsiveness is manifest in themes like 'Strategy' (n=25) and 'Targeted Support' (n=25), which reflect a readiness to refine and

adapt practices for enhanced outcomes. The themes ‘Change’ (n=22) and ‘Future Vision’ (n=19) further underscore an orientation towards proactive adaptation and long-term educational prosperity. This phase completes the cycle by institutionalising successful strategies and correcting courses where necessary, thus embodying a dynamic and evolving educational improvement model that is discussed in the next section.

In order to capture a school improvement ecosystem perspective, Spillane (2022) outlined previous research (for instance, see Cohen & Bhatt, 2012; Cohen & Moffitt, 2009; Mehta & Fine, 2012; Spillane et al., 2019; Woulfin & Gabriel, 2020; Peurach, Cohen, Yurkofsky & Spillane, 2019; Peurach & Neumerski, 2015; Peurach et al., 2019) on educational system building and how this has illustrated how systems are engaging in efforts to build educational infrastructure. However, the school and system leaders within this Diocese were responding to a sense of ethical imperative. This enabled them to respond to prevailing school improvement ecosystem conditions neither exclusively nor on their own, but rather as a *collective* system: to change the conditions of school improvement processes (Macklin & Zbar, 2021), leading to improved learning, teaching and wellbeing outcomes.

Within the Plan-Do-Check-Act cycle, the concepts of *renewal* and *replenishment* were crucial. Renewal refers to restoring or revitalising something that has been depleted or damaged, while replenishment involves replacing or restoring something that has been used up or consumed (Mitchell-Brown, 2013). This section will focus on integrating these concepts into the Act phase of the Plan-Do-Check-Act cycle. Renewal and replenishment were vital to the sustainability of the Strategy, ensuring equitable educational outcomes and the efficient use of resources. Moreover, renewal in the context of this school improvement strategy simply means that it involves renewing the commitment to students and teachers at the heart of school improvement, the professional development for teachers, and the physical infrastructure of schools. Branson and Marra (2022) have argued that “an individual’s self-concept governs their personal needs, values, attitudes, expectations, and assumptions” (p. 53). Renewing these aspects within the Strategy arguably helped enhance the professional self-concept of the teachers, which led to improved educational outcomes and ensured students had the necessary skills and knowledge to succeed. Replenishment involves restoring resources needed to deliver quality education, such as the procurement strategy that purchased $1million of quality literature. In a rural, regional and remote school Diocese, replenishing resources can be particularly challenging, due to both financial constraints and the considerable distance from major (and usually metropolitan) suppliers. However, integrating replenishment into the Plan-Do-Check-Act cycle allowed for developing

sustainable procurement strategies, such as a system-wide purchasing scheme that required collaboration between school and system leaders, which in turn led to the replenishment of book resources in all primary schools, ensuring students throughout the Diocese had access to modern, best practice resources.

The Act phase of the Plan-Do-Check-Act cycle was particularly critical in implementing renewal and replenishing improvements in the Diocese. This phase involved implementing improvements identified in the Check phase, including renewing and replenishing educational resources. Another example of an essential Act outcome involved the Education Office identifying the need to renew the physical infrastructure of schools and allocate resources to repair or upgrade school buildings and facilities. School and system leaders sought solutions to problems such as attendance and unproductive behavioural issues. They explored the data ecosystem to meet the needs of teachers and school and system leaders in addressing these concerns, foregrounding the importance of adopting a collaborative approach. Participants identified that teachers, school, and system leaders worked together to highlight areas for improvement, develop sustainable procurement strategies, and implement improvements identified in the Check phase. Branson and colleagues (2016) suggest that the essence of trans-relational leadership is "to move others, the organisation and the leader to another level of functioning by means of relationships" (p. 155). Such a collaborative approach made renewal and replenishment possible to achieve sustainable improvements in educational outcomes and resource utilisation in the present, while also helping to meet the needs of future generations.

In conclusion, renewal and replenishment were crucial concepts that were integrated into the Act phase of the Plan-Do-Check-Act cycle for this particular Diocese. The Education Office effectively improved learning outcomes, teacher well-being, and resource utilisation by renewing the commitment to students and teachers and replenishing essential educational resources. Achieving these goals required a collaborative approach, with teachers, school and system leaders all playing a role in driving school improvement. Through collaboration, stakeholders could identify areas for improvement, develop sustainable strategies, and implement the necessary changes to meet the needs of current and future generations. The success of the Diocese's Strategy highlights the importance of integrating renewal and replenishment concepts into the continuous improvement process. At the macro level, the focus centred on leadership processes and the strategic Plan-Do-Check-Act cycle. The emphasis was on setting overarching goals, formulating the Strategy, and allocating resources to areas in need of improvement. School and system leaders bore the responsibility of

nurturing an environment that fostered growth and development. As system leader #1 reflected,

> … we are now in a stage where schools are not only embedding these understandings, but looking for ways to set targets that will further enhance student learning and teacher capacity. The increasingly sophisticated use of data to identify areas for growth and measure improvement is adding value to school plans. [#1, system leader]

It was at this macro level where the vision and mission of the school were articulated and aligned with the educational strategies and practices, effectively guiding the direction of the school's improvement journey.

### 7.2 Evidence of Impact

Improving student learning, teaching and well-being outcomes is a multifaceted and complex task that requires a systematic and evidence-based approach. In this regard, schools must employ a range of strategies and tools to measure and analyse their performance, identify areas for improvement, and implement evidence-based interventions to achieve positive student outcomes. Schools' tools and strategies to improve learning, teaching and well-being outcomes can be divided into several categories: system-level tools, school-level tools and research and development strategies (see Figure 7.5 below). Figure 7.5, an analytical creation of mine, visualises the multifaceted strategies and tools employed within the Diocese's school improvement ecosystem to achieve evidence of impact in student learning, teaching, and well-being. This figure categorises these approaches into system-level tools, school-level tools, and research and development strategies. It highlights the importance of employing a systematic and evidence-based approach to education, emphasising the role of various metrics such as student academic achievement, staff satisfaction, and community engagement. By presenting these strategies and tools in this structured format, I aim to illustrate the comprehensive efforts made to assess and enhance the educational effectiveness within the rural, regional, and remote Diocese. This visualisation not only simplifies complex processes but also emphasises the critical role of evidence in driving school improvement efforts, underscoring the interconnectedness of strategies across different levels of the educational ecosystem.

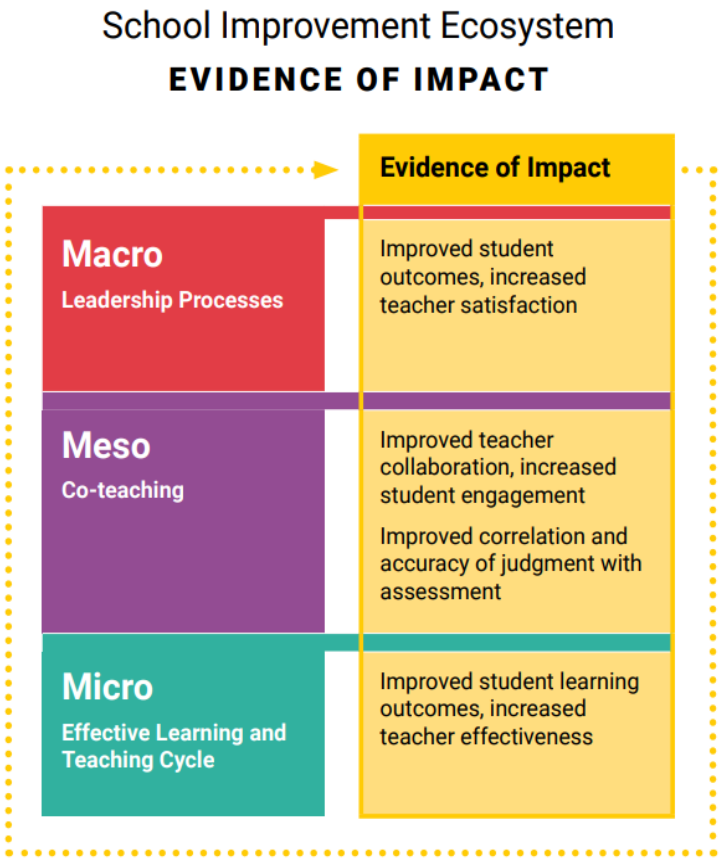



**Figure 7.5***: School Improvement Ecosystem: Evidence of Impact*

One of the primary system health indicators in the data ecosystem was student academic achievement. The Diocese was able to measure this through standardised testing, internal assessments, and progress reports. Key metrics at this level primarily include overall student achievement, staff satisfaction, community engagement, and the effectiveness of implemented strategies. The assessment of student achievement provided insights into the overall educational effectiveness of the rural, regional and remote Diocese, indicating the success or failure of particular elements of the Strategy.

At the macro level, high staff satisfaction reflected the well-being of the teachers and school leaders, whose contentment and motivation directly influenced the quality of education. To measure staff satisfaction, schools and system leaders in this case study used surveys, focus groups, and regular check-ins to gather feedback on staff members' experiences and identify areas for improvement. The effectiveness of implemented strategies provided a direct measure of the success of the Plan-Do-Check-Act cycle in achieving the diocesan mission and goals. In addition to these primary indicators, schools and system leaders also considered other factors that contributed to the overall health of their school improvement ecosystem. These indicators included the availability and quality of resources,

the effectiveness of professional learning, and the degree to which the Strategy was communicated and understood by all stakeholders. Parental and community engagement was another crucial system health indicator. Schools that maintain strong connections with parents and the wider community are more likely to create a supportive learning environment for their students (Epstein, 2001). Within the data ecosystem, school and system leaders were able to assess parental engagement through surveys. By fostering these strong relationships with parents and the community, school and system leaders worked collaboratively to address issues and provide additional support to students in need.

At the meso level, an intermediary between the school's leadership and individual classrooms emphasises collaborative teaching practices such as co-teaching with school leaders. In addition, teachers were often consulting with system leaders. At this level, the focus was on fostering a collaborative environment, facilitating the sharing of knowledge, skills, and experiences among teachers, school leaders and system leaders. The pooling of resources and expertise, characteristic of co-teaching, provided a more personalised and effective teaching approach, thereby directly influencing the classroom environment and the learning experiences of students. Key metrics at this meso level included the degree of teacher collaboration, the availability and effectiveness of professional learning opportunities, and the sharing of best practices among staff. Teacher collaboration indicates the degree of cohesiveness among teachers, the efficiency of their teamwork, and their collective contribution to the educational process (Zhou, Chen, & Chen, 2019). Professional development opportunities and the sharing of best practices among staff reflect the continuous learning environment for teachers, which directly contributes to the quality of education (Peleman et al., 2018). The school improvement ecosystem is dynamic and interconnected; school and system leaders commented that this required regular monitoring and evaluation that ensured the Strategy's continued effectiveness. By regularly assessing the health of the ecosystem through system health indicators, schools and system leaders made informed decisions about where to allocate resources and how to address challenges.

The micro level was concerned with the implementation of the effective learning and teaching cycle at the individual classroom level. Here, the focus was on planning, teaching, assessing, and reviewing learning, with the student at the heart of the process. As emphasised in the Strategy, the quality of education and the creation of a supportive learning environment catering to the diverse needs of students were the priorities at this level.

Key metrics at the micro level included individual student performance, student engagement, classroom climate, and teacher effectiveness. Individual student performance

offered insights into the efficacy of teaching strategies and the potential areas of improvement. Student engagement measured the involvement of students in the learning process, indicative of the effectiveness of teaching methodologies in retaining student interest. Classroom climate reflected the atmosphere and social dynamics within the learning environment. Teacher effectiveness provided a direct measure of the quality of learning and teaching and its impact on student learning outcomes.

Importantly, to maintain a healthy school improvement ecosystem, it was essential for school and system leaders to consider the interconnectedness of these three levels and monitor the key metrics across all levels. Evidently, it was seen that the effectiveness of leadership processes at the macro level directly influenced the success of co-teaching at the meso level and, in turn, impacted the effective learning and teaching cycle at the micro level. Within the Strategy, school and system leaders implemented a comprehensive and systematic approach to monitoring the school improvement ecosystem's health allowing for a more thorough understanding of the strengths and weaknesses of the Strategy. By closely monitoring the various system health indicators, school and system leaders identified areas requiring targeted intervention and adjusted the Strategy accordingly. This proactive approach enabled school and system leaders to continually improve and adapt their practices to meet the changing needs of their students, staff, and community. By distinguishing the three levels of the school improvement ecosystem and employing key metrics to assess their health, the schools in this study were able to develop a nuanced understanding of their system's strengths and weaknesses. This tri-level approach supported the identification of areas requiring targeted intervention and facilitated the adaptation of strategies accordingly. Ultimately, this comprehensive methodology fostered an environment that promoted growth, development and success for all stakeholders involved in this particular school improvement strategy. Moreover, considering the context in which each school operated was crucial for understanding the unique challenges and opportunities the school faced. By taking into account factors such as location, demographics and available resources, the school and system leaders in partnership were able to develop targeted strategies that addressed their specific needs and maximised their effectiveness within their given context.

This holistic approach to school improvement considered the macro, meso, and micro levels ensures that no aspect of the school's ecosystem is overlooked. From the strategic leadership decisions at the macro level, to the collaborative co-teaching practices at the meso level, and the individual classroom experiences at the micro level, each facet plays an integral part in the overall health of the school improvement ecosystem. Moreover, understanding the

health of this ecosystem through this lens allows for the development and implementation of more targeted and effective improvement strategies. For instance, if metrics indicated low staff satisfaction at the macro level, leadership were able to implement professional learning opportunities or supportive policies, which in turn enhanced co-teaching practices at the meso level and improved the classroom environment at the micro level. Similarly, if student academic achievement was low at the micro level, school and system leaders prompted changes to teaching practices at the meso level, such as increased collaboration or the introduction of more engaging teaching methods. These changes were then supported by the Strategy at the macro level, such as the allocation of resources for new teaching materials or professional learning. In essence, understanding and monitoring the health of the school improvement ecosystem across these three levels enabled school and system leaders to respond proactively to challenges and opportunities. This approach ensured that all aspects of the school environment – from learning and teaching cycles to co-teaching processes practices to leadership processes – were aligned towards a common goal: to provide the best possible education and support for students.

Revisiting my reflective journal, I am drawn to a passage that crystallised our unique approach to school improvement. The Director's encouragement and gift for expansive thinking often allowed us to weave words and ideas into our roadmap for change, marking a pivotal shift in our strategic outlook.

> In the early morning tranquillity of the diocesan building, amidst historical walls that have witnessed Catholic education for over a century, I pondered the goals laid out before us. The morning fog blanketed the valley outside, shrouding the mountains and paddocks. Our data ecosystem detailed our metrics of success: clarifying our tasks for today, this week, this month, and the framework for the coming year.
>
> “It’s about Literate and numerate students,” I recalled, a concept shared earlier in the morning by a mentor from Brisbane, reflecting our open-minded dialogue.
>
> In this meeting room, it was my colleague's timely remark that truly encapsulated our mission's essence: "For a hope-filled future". This perspective shifted our focus from immediate metrics to the nurturing of hope as our ultimate goal. The clarity that emerged with the morning's dissipating fog illuminated the evidence of our impact—beyond data, we were shaping futures.
>
> This realisation lit the way forward, coalescing into the powerful yet succinct slogan: "Literate and numerate students for a hope-filled future". This became our guiding principle, ensuring our day-to-day work and strategic plans not only enhance academic abilities but also

forge pathways to the promising futures our students dream of. This is the evidence of our impact.

This reflective vignette, capturing the synthesis of concrete data and aspirational goals, bridges back to my thesis, illustrating that our evidence of impact lies both in immediate academic outcomes and in cultivating a lasting hope for our students' futures.

### 7.3 Analytical Summary

The macro-level leadership processes in the school improvement Strategy illuminate a sophisticated orchestration of change. These processes underscore the pivotal role leadership plays in both enhancing educational contexts and directly impacting outcomes, thus addressing the core research questions. At the macro-level, leadership guides the ‘Plan’ phase of the school improvement strategy, setting the stage for systemic transformation. Here, the strategic initiation, influenced by Branson and Marra's (2022) organisational ecology, leverages the catalyst of new leadership and the promise of well-timed opportunities to establish a foundation for educational enhancement that resonates across the rural, regional, and remote Diocese. This strategic planning responds to the research questions by crafting the basis upon which the entire school improvement ecosystem can evolve.

In the ‘Do’ phase, macro leadership fosters a collective efficacy that mirrors the collaborative nature of the water cycle’s condensation. The role of leadership transcends individual achievements, aligning with the ecological interconnectedness of the organisation to secure systemic educational gains. This phase ensures that educational progress is sustained and embedded within the infrastructure of the system's improvement efforts. During the 'Check' phase, macro leadership undertakes a reflective and evaluative role. Here, the strategic evaluation and monitoring of the implemented strategies ensure the educational ecosystem's ongoing health and vitality. The school and system leaders’ responses to data and evidence are critical to a strategic ecology that is dynamic and responsive to the unique needs of each school within the Diocese. The ‘Act’ phase symbolises the renewal and adaptive capacity of the system. Strategies are refined, resources are realigned, and a dedication to continuous improvement is central. Macro leadership ensures the system’s ability to adapt and flourish amidst the distinct challenges of rural, regional, and remote educational contexts.

Through the Plan-Do-Check-Act cycle, macro leadership delineates the strategic roadmap for school improvement, echoing the principles of organisational ecology. This strategic coherence ensures that plans are not only comprehensive but also agile and

responsive to the educational landscape's complexities. Furthermore, the macro-level leadership's influence on school improvement outcomes is evident through the strategic actions and practices enacted. These processes demonstrate a nuanced understanding of the organisational ecology, where every action contributes to a larger, sustainable educational outcome. Leadership practices at this level determine the health of the school improvement ecosystem, underlining the importance of macro leadership in driving effective change within the Diocese.

This analytical summary demonstrates how leadership at this level is instrumental in driving change and fostering an environment conducive to educational excellence, directly answering the research questions and highlighting the profound impact of leadership on the quality and sustainability of school improvement strategies within the diocesan ecosystem.

Thus, the macro-level leadership processes unveiled in this chapter highlight pivotal strategies for advancing education within rural, regional and remote contexts, underscoring the indispensable role of leadership in fostering systemic change. The strategic orchestration of the Plan-Do-Check-Act cycle within these unique settings illustrates a dynamic approach to addressing the inherent challenges and leveraging the distinct opportunities present in less urbanised areas. Leadership's ability to navigate the complexities of timing, opportunity and resource allocation becomes crucial in these environments, where geographical isolation and limited access to resources often hinder educational progress. By emphasising collective efficacy and the strategic application of organisational ecology principles, the findings offer a roadmap for cultivating robust educational ecosystems that are resilient, adaptable, and capable of providing high-quality education despite geographical constraints. This approach underscores the necessity of strategic, evidence-based leadership in rural, regional, and remote schooling communities, where the effective implementation of scalable, sustainable improvement strategies can significantly impact student learning, teaching quality, and overall school health. Thus, the macro-level leadership processes detailed in this chapter serve as a testament to the transformative power of strategic leadership in enhancing educational outcomes and equity across diverse educational landscapes, providing valuable insights for policymakers, educators, and leaders working within the complexities of rural, regional, and remote education.

### 7.4 Chapter Summary

In conclusion, improving student learning, teaching and well-being outcomes was a multifaceted and complex task for the Diocese, which required a systematic and evidence-based approach. Schools' tools and strategies to achieve positive outcomes could be divided into several categories: *i) system-level tools*, *ii) school-level tools* and *iii) research and development strategies*. System-level tools enabled the schools to evaluate and compare their performance to other schools in their region or across the state, whereas school-level tools were used to measure and evaluate student performance, attendance rates and well-being outcomes. Finally, research and development strategies were designed to enable schools to develop their own evidence-based interventions and evaluate their effectiveness. Ultimately, the success of the school improvement ecosystem depended on the coordinated efforts of teachers, administrators, and support staff, as well as the collaboration of parents and the wider community, to ensure that students received the best possible education and opportunities for growth and development. Moreover, the student pathway from primary school to the end of secondary school was a critical journey that impacts a student's academic achievement and future opportunities. The interviews and documentary evidence demonstrated how a clear and structured approach to this pathway can help students receive the necessary support and resources required to reach their full potential.

In the context of the Diocese, the student pathway began at the primary school level with Best Start, a program carried out at the beginning of the Kindergarten year designed to assess a student's concept of print. The student pathway then included InitialLit, which assesses a student's phonological awareness, a critical foundation for reading in the early years of schooling in Kindergarten to Year 1. The next step was PM Benchmarks, a reading diagnostics assessment that helps teachers tailor their teaching to individual student needs with frequent data collected and analysed. The Cold Write assessment evaluates a student's writing ability and is performed every month between Kindergarten and Year 6. Finally, A to E reporting provided regular feedback to parents and caregivers on a student's progress. Then, as the students moves to the upper primary grades, they were engaged in more formal assessments including the PAT and NAPLAN tests. These assessments provided a more detailed evaluation of a student's academic progress and helped inform teaching strategies.

As the students transitioned to Year 7, the "Writing using AI" program provided an innovative approach to writing assessment, utilising artificial intelligence to provide student feedback. The PAT and NAPLAN assessments continue to evaluate student progress, and A-to-E reporting continued to provide regular feedback to parents and caregivers. At the

secondary school level, Stage 6 results, including the Higher School Certificate (HSC), were considered critical for students' future educational and career opportunities. The Vocational Education and Training (VET) program provided opportunities for secondary school students to gain practical skills and work experience over 3 years from 2018 to 2020. Finally, exit surveys provided critical feedback on a student's experience in secondary school, which helped inform future improvements. Overall, it was argued that this comprehensive student pathway program provided a clear and structured approach to assessing and evaluating a student's academic progress within the Diocese, from primary school to the end of secondary school. By utilising a range of assessments and evaluations, the teachers and school leaders were therefore able to tailor their teaching strategies to meet the unique needs of each student, ensuring that they received the necessary support and resources to reach their full potential.

# Chapter 8: Conclusions and Recommendations

This chapter starts by revisiting the research goals and objectives, along with the individual contributions of each chapter to the study. It subsequently summarises the empirical and conceptual contributions of this thesis, contending that the relationship between school and system leaders is vital in co-designing school improvement processes. Furthermore, the concept of a school improvement ecosystem accounts for dispositions that allow biotic and abiotic outcomes to co-exist, as well as the notions of a shared ethical purpose, trust and co-design that revolve around collaboration and working in teams. Such an orientation is possible when school and system leaders align within a school improvement ecosystem to leverage process, but also to attain a shared belief and value system as a purpose. The relationship between school and system leaders helps to define how school improvement can be established and be successful within a Diocese. This chapter proceeds by evaluating the research methodology, acknowledging possible limitations of the study and the researcher's role in it. It concludes by suggesting implications for practice and proposing directions for subsequent research.

## 8.1 Synthesis of Purposes and Goals, Chapter Overview and Contributions to Theoretical and Practical Knowledge

From the beginning, the intention of this investigation was to explore methods of how school and system leaders co-designed processes for school improvement within a rural, remote and regional Diocese. This culminated in the formulation of the research questions that guide this investigation:

- What role can the school play in enhancing rural, regional, rural remote contexts?
- What role do teachers, school leaders and system leaders have in improving educational achievement?
- How might regional, rural and remote schools go about this?
- How are regional, rural and remote schools determined and addressed by effective school improvement processes at a system, school, and classroom level?
- What strategies are used to plan, determine, implement and evaluate school improvement processes?
- In what ways do school and system leadership practices determine and implement school improvement processes in remote schools?

- How do these school improvement processes influence the school improvement outcomes achieved?

Chapter 1 delineated the overall research context, situated within the setting of rural, regional and remote Diocese between 2018-2020, and specifically with the Strategy. Preliminary investigations were conducted to comprehend the possible boundaries of the study, and literature from various academic fields was examined, including rural, remote, and regional education, educational disadvantage, school improvement, organisational ecology, implementation science, and teacher, school and system processes. In this process, specific publications and documents were consulted, representing key existing scholarship within these realms. Noteworthy among these sources were those offering theoretical frameworks; these were described in conjunction with their anticipated contributions to both the theoretical and empirical landscape. Chapter 2 critically reviewed school improvement literature, notably with regard to school improvement processes and attempts by teachers, schools and systems to improve learning, teaching and wellbeing outcomes. It discussed the impact of that school improvement and considered how school improvement was conducted in rural, regional and remote education and how it has evolved over the last 30 years, including assessing educational disadvantage upon progress. The chapter determined that the roles within schools and systems have evolved, particularly since the Gonski Review (2011) and that school improvement more generally was complex and continuous.

What was evident during this study was that there were a number of factors that influence school and system leaders; amongst them school improvement, school and systems leaders' beliefs about processes and educational disadvantage. Furthermore, Chapter 2 concluded that school improvement is an emerging factor in schools and at any time, and that contextual factors such as the nexus between people, data and processes have an impact on how school improvement transpires.

Building on this foundation, Chapter 2 shifted to examine the foundational theories that shaped this exploratory case study, starting with an analysis of the concepts related to the diocesan context in the wake of the newly implemented Strategy. It explored how educational theory addresses school improvement and proceeded to concentrate on processes from an ecological perspective that helped to explain school improvement. Significantly, by integrating and evaluating diverse bodies of literature, we can consider school improvement as an ecosystem. This approach allows us to examine teachers', schools', and systems' responses to this ecosystem from a theoretical perspective.

Chapter 3 presented the methodological approach adopted for the study, which integrated an interpretivist and social constructionist epistemology. This approach acknowledged the existence of multiple realities as experienced by the researcher, the research assistant, and the participants. The chapter delved into the strategy behind employing an exploratory case study method, detailing the multi-faceted components and the selection of research tools suited for this domain. It outlined the process of selecting and recruiting participants for semi-structured interviews and the incorporation of documentary evidence to validate the findings. Particularly, it explained the rationale for limiting the participant pool to those directly engaged with the Strategy and the necessity of a research assistant for data generation. Furthermore, it discussed the open coding and analytical methods used, as well as the measures taken to ensure the quality, rigor, and ethical integrity of the research.

In Chapter 4, the foundational concepts of the data ecosystem and the school improvement ecosystem, served as a pivotal juncture in this thesis, introducing not only the Strategy but also This chapter presented a detailed case study of the Strategy's enactment, revealing the interplay between data, people, and processes. It highlighted how the Strategy was not a standalone initiative but part of a broader ecosystem where data flows informed decision-making and practices at all levels. The chapter detailed how a data ecosystem was established, characterised by the systematic collection, analysis, and use of information to guide the school improvement efforts. This data ecosystem provided the necessary insights for school and system leaders to understand their current state, measure progress, and adapt strategies as needed. Simultaneously, the school improvement ecosystem was described, consisting of the dynamic interactions between the educational actors—students, teachers, school leaders and system leaders—and the processes they engage in. It explained how the Strategy was a response to the identified needs within this ecosystem, designed to enhance learning, teaching, and well-being outcomes. By doing so, Chapter 4 set the stage for subsequent chapters to delve deeper into the specific components and levels of the school improvement ecosystem.

The exploration of the Strategy within the school improvement ecosystem underscored the necessity for a nuanced approach to school improvement, one that accounts for the varied elements and their interconnections. This chapter concluded that understanding and navigating the school improvement ecosystems are crucial for driving effective and sustainable educational change.

Chapter 5 delved into the micro level of the Effective Learning and Teaching Cycle, demonstrating how individual student performance, classroom engagement, and teacher effectiveness are essential components of the school improvement ecosystem. This chapter provided a granular analysis of the use of data to inform and refine teaching practices, underpinning the cycle of continuous improvement. The findings underscored the direct impact of targeted teaching and specific feedback on student learning outcomes, illustrating the micro processes that propelled the Strategy forward.

Chapter 6 transitioned to the meso level, focusing on the dynamics of Co-teaching. It explored how collaborative planning and interconnected teaching processes were central to the Strategy's success. The chapter illuminated how meso-level processes, characterised by the co-design of educational practices, fostered professional learning communities that were instrumental in enhancing teacher capabilities and student achievement. The meso level emerged as a critical link between the individual classroom practices and the broader systemic strategies, reinforcing these layers within the educational ecosystem.

Chapter 7 ascended to the macro level, examining the overarching Leadership Processes that governed the Strategy's implementation. Through the Plan-Do-Check-Act cycle, this chapter elucidated the strategic decision-making and adaptive leadership that underpinned the continuous evolution of school improvement initiatives. It emphasised the role of leaders in not only setting the vision and direction for the Strategy but also in creating the conditions necessary for the micro and meso processes to thrive. This chapter concluded that effective leadership is pivotal in shaping the educational landscape and in steering the complex processes that constitute the school improvement ecosystem.

Chapter 8 synthesised the insights gleaned from all levels, offering a comprehensive overview of the school improvement processes within the Diocese. This final chapter reflected on the integration of the micro, meso, and macro levels and their collective influence on the Strategy's outcomes. It concluded with a reflection on the study's contributions to the understanding of school improvement as a dynamic and interconnected ecosystem, and it offered recommendations for future research and practice, advocating for a systemic and ecological approach to enhancing educational outcomes in rural, regional, and remote settings.

## 8.2 Empirical Contributions

Chapter 5 expanded upon the empirical discoveries detailed in the preceding chapter and provided insights into how school improvement is effected within a regional, rural and remote Diocese, through a four step co-designed process (refer below to Figure 8.1).

## School Improvement Ecosystem – Conceptual Framework – Macro, Meso and Micro Level Approaches

| Level of Approach | Context | | Processes | | | | | Evidence of Impact |
|---|---|---|---|---|---|---|---|---|
| | Key Metrics | Description | Definition, Participants and Cycle | Phase 1 | Phase 2 | Phase 3 | Phase 4 | |
| **Macro** Leadership Processes | **Overall student achievement, Staff satisfaction, Community engagement, Effectiveness of implemented strategies** | • Measured through standardized testing, internal assessments, and progress reports for student achievement.<br>• Staff satisfaction can be gauged through staff surveys, focus groups, and regular check-ins.<br>• Community engagement can be assessed through surveys, attendance at school events, and participation in parent-teacher conferences.<br>• Effectiveness of implemented strategies can be assessed through performance metrics and feedback. | **Definition:** School and System-wide, overarching strategies and processes for school improvement.<br>**Participants:** System leaders, school leaders, teachers<br>**Cycle:** PDCA | **Plan: Timing and opportunity**<br>Defining objectives, strategies, and goals based on context and available resources. | **Do: Collaboration and synergy**<br>Working together to implement strategies and initiatives, leveraging the strengths of each participant. | **Check: Adaptation**<br>Evaluating progress, identifying areas for improvement, and making necessary adjustments. | **Act: Renewal and Replenish**<br>Continuously refining and renewing practices to maintain momentum and improve overall effectiveness. | **Improved student outcomes, increased teacher satisfaction** |
| **Meso** Co-teaching | **Degree of teacher collaboration, Availability and effectiveness of professional development opportunities, Sharing of best practices among staff** | • Teacher collaboration can be evaluated through observation and surveys.<br>• Professional development opportunities can be assessed through participant feedback and observing changes in teaching practices post-training.<br>• Sharing of best practices can be tracked and measured via performance metrics and feedback. | **Definition:** Collaborative processes and relationships among educators to enhance learning and teaching.<br>**Participants:** School Leaders, teachers and System Leaders<br>**Cycle:** Co-Teaching | **Co-planning: Iterative**<br>Collaboratively designing lessons, identifying learning objectives, and determining instructional strategies. | **Co-Teaching: Interconnected**<br>Jointly delivering instruction, leveraging each teacher's expertise to support diverse learners. | **Co-Debriefing: Collection and monitor**<br>Gathering, moderating and analysing data to assess student progress and instructional effectiveness. | **Co-reflecting: Abundance and quality**<br>Reviewing, discussing, and refining instructional practices to improve student outcomes and teacher collaboration. | **Improved teacher collaboration, increased student engagement**<br>**Improved correlation and accuracy of judgment with assessment** |
| **Micro** Effective Learning and Teaching Cycle | **Individual student performance, Student engagement, Classroom climate, Teacher effectiveness** | • Individual student performance can be measured through assessments and grading.<br>• Student engagement can be gauged through participation metrics and surveys.<br>• Classroom climate can be evaluated through observation and student feedback.<br>• Teacher effectiveness can be measured through student performance, feedback, and observation. | **Definition:** Learning and teaching processes focused on student outcomes and teacher effectiveness.<br>**Participants:** Teachers, School Leaders, and System Leaders<br>**Cycle:** Learning and Teaching Cycle | **Using data to lead learning: Source**<br>Gathering and analysing data to inform instructional decisions and target specific student needs. | **Targeted teaching: Flow**<br>Customising teaching to address individual student needs, promoting growth and achievement | **Focused feedback: Recirculation**<br>Providing timely, specific, feedback to guide student learning and inform instructional adjustments. | **Strong assessment: Balance**<br>Utilising diverse assessment strategies to measure student progress and ensure a balanced approach to teaching and learning. | **Improved student learning outcomes, increased teacher effectiveness** |

**Figure 8.1:** *School Improvement Ecosystem*

After delving into the intricate details of the school improvement ecosystem, it becomes essential to distil this complexity into a more digestible and actionable form. Figure 8.2, entitled 'Simplified School Ecosystem,' achieves this by providing a distilled visualisation of the ecosystem, focusing on the pivotal aspects that drive improvement within schools. This simplified model serves as a bridge, translating the comprehensive processes and relationships explored in previous chapters into a straightforward, accessible framework. The essence of this simplification lies in its ability to highlight the critical pathways for school and system leaders as they navigate the school improvement journey. By focusing on key elements, the simplified ecosystem underscores the actionable steps leaders can take to foster improvement. This approach ensures that despite the underlying complexity of improving school performance, the path forward remains clear and manageable.

In presenting this simplified ecosystem, it becomes evident that the efficacy of school improvement efforts hinges not only on the depth of strategies employed but also on their clarity and communicability. Thus, Figure 8.2 is not merely a reduction of the ecosystem but is rather an essential tool in crystallising the strategic vision into tangible actions and outcomes. It encapsulates the empirical contributions of this research, providing a clear, visual representation of the co-designed school improvement process and its critical components. By transitioning from the detailed ecosystem to this simplified model, the research acknowledges the necessity of making school improvement processes accessible and understandable to all stakeholders involved. In doing so, it empowers school and system leaders to effectively engage with and contribute to the Strategy, fostering a cohesive and informed approach to educational enhancement in rural, regional, and remote contexts.

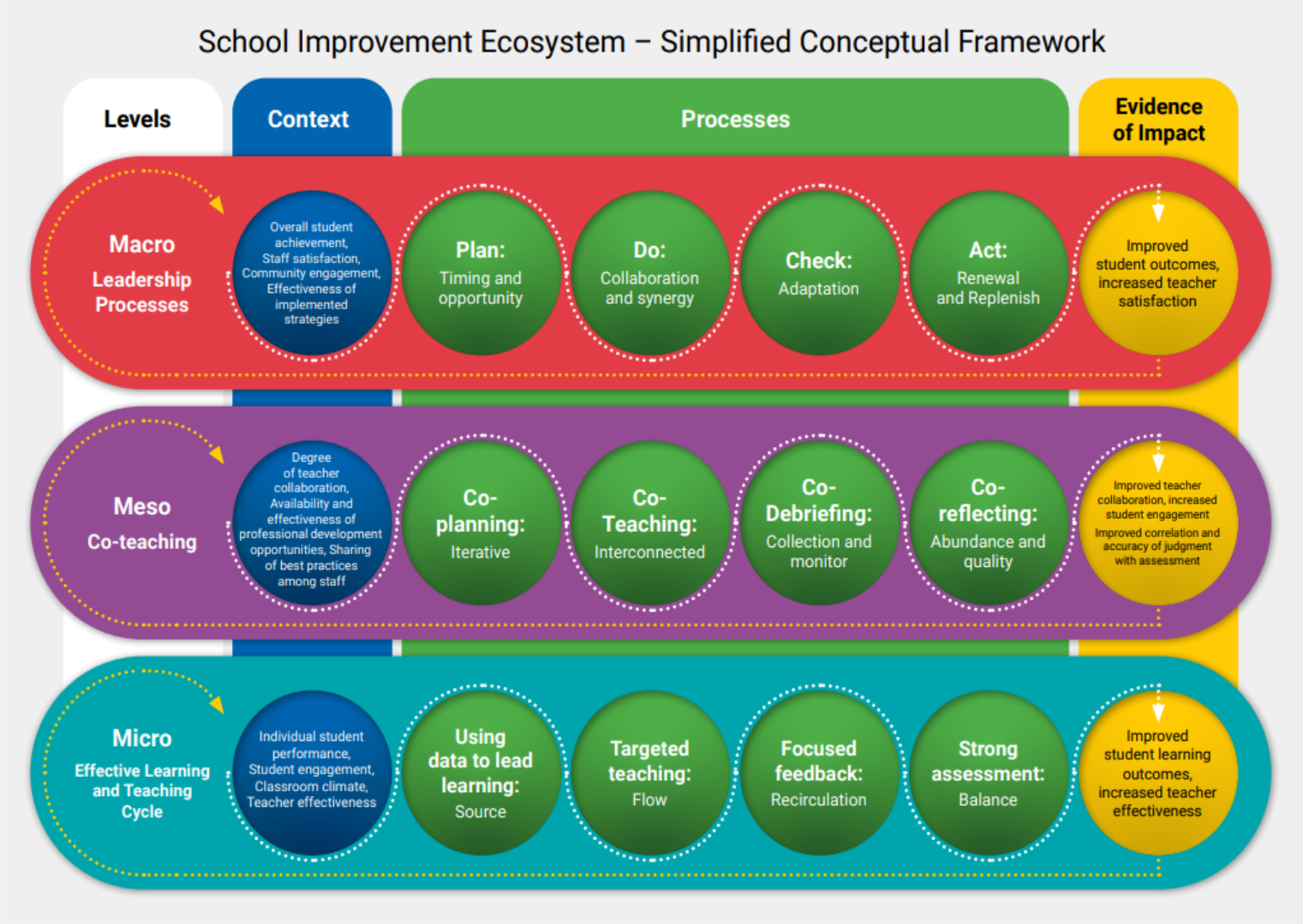



*Fig 8.2 Simplified School Ecosystem*

The co-designed school improvement process assisted school and system leaders who engaged in the Strategy to define their roles, use data and confirm the processes to implement school improvement in a rural, regional and remote Diocese.

Utilising the interview and documentary evidence presented in Chapter 4, it was possible to discern how the concept of school improvement was initially perceived, initiated, and developed. As specified in section 4.1.2, the interplay of strong relationships and a forward-looking vision for leadership development were crucial factors in the adoption process.the processes, which were described in Chapters 5 to 7. Key to this diocesan system change were the Instructional Leadership Teams, comprised of school and system leaders, tasked with motivating the broader school staff to improve learning, teaching and wellbeing outcomes. The success of the Instructional Leadership Teams in their role enabled the deployment of various pivotal phases of the Strategy, which were thoroughly analysed in Chapter 5.

At the core of this school enhancement endeavor was 'co-design', which permitted school and system leaders to embrace a truly collaborative method of interaction within the Diocese. Furthermore, it revealed the intrinsic dynamics and challenges associated with the school improvement journey and at the micro-level involved in transforming pedagogical processes.

### 8.3 Theoretical Contributions

Chapters 5 through 7 proceeded to articulate and examine the key theoretical contributions of this thesis by delving into the notion of a school improvement ecosystem. They contextualised the empirical data from Chapter 4 within the scope of literature and established theoretical constructs, particularly those related to organisational ecology. Theoretically, these chapters elucidated the collaborative efforts of school and system leaders to craft a unified methodology for school improvement initiatives via the Strategy. This necessitated a collective endeavor and the exchange of beliefs, knowledge, and insights to enhance educational and wellbeing outcomes. Furthermore, they illustrated the leaders' drive to achieve Strategy outcomes that reinforce the concept of systemness.

Chapters 5 to 7 also considered critiques of the analysis presented in Chapter 4 and of the theoretical contributions of the school improvement ecosystem by exploring and evaluating school improvement processes explanations to the findings. Firstly, at the micro level, school and system leaders effected school improvement by working with teachers to influence the learning and teaching cycle. In particular, the literacy block was identified as a

key driver for improving learning, teaching and wellbeing outcomes. The findings demonstrated how school and system leaders also chose a path for the organisation known in the literature as ‘learning fast’. ‘Learning fast’ led school and system leaders to collaborate with other researchers and system leaders to widen access to what was on offer in the Diocese, for example by taking research from other systems. Secondly, at a meso-level perspective, the Strategy demonstrated how school and system leaders were able to co-design a process that was ultimately able to influence the learning and teaching cycle. Moreover, it was observed that the introduction of the CPLC resulted in significant school improvement, as demonstrated through the findings presented in Chapter 4. Thirdly, at a macro-level, the Strategy advised school and system leaders to implement Instructional Leadership Teams to incorporate school improvement processes. The resulting outcome was that school and system leaders developed an ecological culture with interdependent relationships within the system.

While taking into account the various interpretations of the previously presented data, and in consideration of the interview and documentary evidence introduced in Chapter 4 to 7 concluded that the Strategy, teachers, school and system leaders worked together and with relationships that co-designed and effectively contributed to the school improvement ecosystem. This co-designed process at the micro, meso and macro levels resulted in fundamental school improvement within a remote, rural and regional Diocese. This offers the two emerging concepts of school improvement ecosystems as theoretical extensions to the work of Branson and Marra (2022), as well as an example of how the use of precision data is able to monitor the school improvement ecosystem and is central to evidence of impact and thus school improvement.

This research has delved into the collaborative efforts of school and system leaders to co-design school improvement processes. By working together, school and system leaders explored the co-designed school improvement processes. The co-designed processes created meaning, sense making and perspective, and this was translated into actions and processes that resulted in school improvement. This research has drawn on theoretical concepts from the literature of school improvement processes and has offered the concept of a school improvement ecosystem. Furthermore, by conducting a comprehensive examination of pertinent literature, this study has critically considered the processes involved in school improvement. The ultimate goal of discerning implications for theoretical and practical applications will be addressed in Chapters 8.6 to 8.10.

## 8.4 Limitations of the Research Process

### *8.4.1 Limitations*

Terra and Passador (2015) set out the various challenges with the research of social systems within organisational research, notably around the integration of systems thinking theory, practice, policy and strategy. They argue social sciences research is theoretically transdisciplinary, phenomenological and engages with both the worlds of theory and practice. In that sense, this research is limited in scope, as it is focussed on a group of schools and their corresponding 12 school and system leaders for a comprehensive understanding of rural, regional and remote schools. The theoretical lens of symbolic interactionism of the participants in these schools and systems, including their beliefs, thoughts and processes, was examined. Thus, the findings are presented as being system-specific and cannot be extrapolated to the entirety of regional, rural and remote schools, nor other school improvement processes within schools. Therefore, this limitation was overcome by providing semi-structured interviews with individuals, to discuss specific areas, including the school improvement styles of system leaders, where a person-by-person analysis is needed (Creswell, 2015). These limitations have been previously addressed within Chapters 1 and 3 regarding the adoption of a narrative review and regarding my approach to the research process (the latter will be considered further in Chapter 8 (8.33); however, other areas remain for consideration.

Beyond the methodological boundaries, my positionality as a School Performance Leader within the system under study presented both unique insights and inherent constraints. This dual role enabled unparalleled access to the lived experiences and perspectives of school and system leaders, enriching the depth and authenticity of the data collected. However, it also posed challenges associated with maintaining an “objective” stance, which also potentially influenced the interpretation of findings and conclusions drawn. Conscious of these dynamics, I employed strategies such as engaging a research assistant for data collection and establishing a robust reflective practice to mitigate bias. This approach aimed to balance my insider knowledge with the necessary distance to ensure research integrity. Nevertheless, my positionality might have shaped the conversations in subtle ways, affecting the articulation of experiences and, subsequently, the study's findings. Acknowledging this duality is crucial for a nuanced understanding of the research outcomes and their applicability beyond the immediate context.

### *8.4.2 Interview Sample and Approach*

The decision to select the school and system leaders as research participants has been discussed in Chapter 3 (Chapters 3.4.2 and 3.4.3), where I aimed to acknowledge that other perspectives and voices existed both within and outside of the Strategy. Albeit recognising the scope of this study, the researcher limited this study regarding research participants to those actively engaged within the Strategy. Notably, the additional voices of teachers, students and parents are absent. It is assumed that teachers, students and parents would have offered different perspectives about the need for, approach to or purpose of the Strategy. In an attempt to narrow in on the evidence and process and the interrelationships between school and system leaders and to bring in different theoretical perspectives to account, these voices were deemed outside the scope and constraints of the research process.

### *8.4.3 Categorising 'School and System Leaders'*

Categorising the participants within this research study as school and system leaders is intended to delineate between the voices. These individuals had a desire to create systemness within the Diocese and charted the Strategy. In a different analysis, they might have been portrayed merely as 'leaders', with their personal influence being the pivotal element in advancing the Strategy. While aspects of personal influence are indeed present in this research, as discussed in Chapter 3, the role of the participants as school and system leaders within the Strategy was to bring the qualities of the individual into the school improvement ecosystem. Working with others, they negotiated the Strategy through team cohesion, embedded instructional leadership and management knowledge into the school improvement ecosystem, which was done in the interests of not only the schools but also others within the Diocesan Office.

As such, when the school and system leaders returned from Principals' Meetings related to the Strategy to their schools and system offices, their responsibility included advocating for and often justifying the Strategy's intent, as well as facilitating its progression through the CPLC. As such, they played an essential role in shaping the course of the Strategy within the schools and the broader system. Without these leaders advocating for it, the Strategy might not have been successfully integrated into the Diocese's classrooms. The term 'school and system leaders' refers to the individuals from both schools and the system at large who executed a leadership function within the Strategy and disseminated its principles back into the schools, and consequently into the classrooms, influencing school improvement.

### *8.4.4 Single Case Study: Further Triangulation*

Crowe and colleagues (2011) described how a case study strategy presents the researcher with the opportunity to explore an event or phenomenon in depth and in its natural context. The exploration of the phenomenon of initial placement within the realm of school improvement concepts, which also considers ecological theory and the significance of processes in initiating school improvement, is reinforced by these findings. The case study methodology was chosen for its ability to contextualise processes, aligning with Walker & Moulis's (2022) understanding, and was found especially pertinent for investigating the Strategy-focused research question. Its utility was further affirmed for inquiries demanding in-depth knowledge of processes of school improvement in a rural, regional, and remote Diocese. Quality and rigour concerns have been addressed in Chapter 4. Yet, as a retrospective single case study, it lacks a comparative dimension to gauge whether leaders would uniformly engage in collective processes within the school improvement ecosystem. The results and analysis are products of an interpretivist approach, reflecting decision-making that could vary from one researcher to another.

The corroboration of interview findings with documentary evidence strengthened the study's validity, though methodological triangulation might have been enhanced with additional tools like surveys or regression analysis. The doctoral study's scope limited the possibility of multiple analysts reviewing the results, but future research could benefit from such collaboration to bolster quality and rigour. Nonetheless, the interview of 12 participants and the incorporation of documentary evidence does suggest a form of triangulation, providing diverse perspectives, insights, and theoretical interpretations that offer a multifaceted evaluation of the data. (Cresswell, 2015).

## 8.5 Reflections on the Research Process and the Researcher's Role

Bainbridge, Whiteside and McCalman (2013) state that researchers should use strengths-based research approaches that, "build on the strengths of individuals, families, and communities to assist in recovery and empowerment, and are increasingly advocated by international support agencies and others to create sustainable change" (p. 277).
Adopting a social constructionist epistemology, the researcher is not merely an observer but is acknowledged as an integral participant in the knowledge creation process, actively contributing as a researcher, academic, and citizen to the evolution of school improvement. This standpoint, as elaborated in Chapter 3, acknowledges the influence of the researcher's

role, as highlighted in leadership studies by Robson (2022), and considers the principle of reflexivity to be significant in this context as, “being aware of the value of systematic reflection engenders a spirit of continuous improvement.” (p. 47). Moreover, this reflexivity is a means of learning within the research process, which thus implies learning side by side with colleagues. Seravalli, Upadhyaya & Ernits (2022) consider reflexivity as focusing on the capacity for ongoing learning and adaptation by supporting questioning and processes.
The inherent limitations of this study stem from the researcher's own perspectives, notwithstanding the rigorous methodological and theoretical frameworks applied to data generation and analysis, as well as its foundational concepts. In closing, it’s important to clarify that the intention of this thesis was not to evaluate the Strategy's merit or demerit, in line with Hammersley's (2000) advice that adopting a judgemental stance within research equates to an oppositional stance. Yet, the researcher's professional experience in school and system leadership, which advocates for the positive influence of leadership on schools, cannot be detached from this work. Still, there are remaining inquiries about the research methodology and the unique contributions of the researcher's background and approach, which are further discussed in the subsequent sections.

### *8.5.1 What Influence Did the Researcher Exert on the Gathering of Empirical Data?*

Over the course of several years, I went from a school leader to a system leader, which changed the position of responsibility that I had within the Diocese. Therefore, I made the decision to enlist an independent research assistant to gather the data for this analysis. This facilitated the process of recruiting participants and ensured there were no perceived conflicts of interest. Upon analysing the interview transcripts, there was one interview that did not go as smoothly for the research assistant as possible. I identified a reticence in the participant, who had a detailed understanding of related topics that I was working on in a work capacity, and the participant did not appear to want to unduly influence the outcome of the interview. In a subsequent interview, I asked the research assistant to go back, conduct a further interview, and ask questions from a different angle, and to avoid the topic that the participant and I were familiar with. In doing so, the research assistant was to draw out wisdom on a different topic. This exerted a tangible effect on the interviewing process and prompted me to consider the extent of reflexivity required during the research.

Deciding how much of one's personal perspective to disclose in research is always a nuanced judgment. However, my epistemological position facilitated a comfortable engagement with the “I/me” as a discreet component of the research journey. At times, it

helped that my research assistant did not know the participants but had a detailed understanding of working in remote education. It was encouraging that the participants were able to disclose details of the Strategy due to the backgrounding that the participants needed to provide in context. In the interviews I found a richness in data, including some unexpected themes, including the recurring theme of the interrelationship between people, data and processes.

### *8.5.2 What Impact Did my Research Have on the Participants?*

As Clarke (2010) reminds us, interviews are structured in a way to capture how any specific behaviours, thinking processes, or attitudes could be found to be linked with emotional awareness and knowledge of emotions. This extends past the ethical deliberations detailed in Section 3.6 of the thesis. The research prompted participants to reflect on their past practices and engagement in co-designing and implementing the Strategy, which at the time of data generation, had ended the previous year. For many of the participants' involvement, it was hard to distinguish between their work and the work of the Strategy. Asking the participants to recall their actions may have unintended consequences for those involved; indeed, several participants reflected on the positive experiences of collaborating with a shared moral purpose and the enjoyment derived from being part of strong teams dedicated to school improvement in a rural, regional, and remote Diocese. Additionally, the participants discussed their role in forging what they deemed essential and fruitful outcomes for both schools and systems that were to have a positive effect for the students in the schools. Other participants wondered about the fragility of the school improvement. Ultimately, how these changes would affect the school and system leaders for the Diocese in the long term is unknown. I captured the following reflection after a particularly hard day work in my research journal after a wide-ranging discussion with the Director:

> The learning and teaching has had an impact for sure. But, it is not the main thing. The thing that has worked best are the relationships. The thing that I have worked hardest on are the relationships. The relationships with the Director and the school principal. The relationship between the principals. The relationships between the schools and the office. The relationships are the achievement that I am most proud of in my time as Director.

Those accounts present an ethical responsibility on the researcher's part to remain aware of the potential effects interviews may have on participants, particularly as they recount past experiences. This underscores the necessity of establishing communication with the research assistant and allocating time to build relationships and rapport with participants, as previously mentioned. Nonetheless, I am cognisant of the fact that I was leaving individuals to contend with their reflections well beyond the conclusion of the interview recordings.

### *8.5.3 What Impact did the Research Have on the Researcher?*

My professional life has unfolded in the sphere of education, with a commitment to working in disadvantaged schools. At times, the thought of shifting to the family farm has crossed my mind, but I've hesitated, aware of my limited farming know-how compared to my more familiar understanding of schools. I have a deep-seated commitment to helping disadvantaged students within the educational setting, and as an extension of that, a profound interest in how the system works and functions. When I embarked on the process of doctoral studies, my conviction was that school and system leaders and teachers were working towards making a difference in the lives of their students and communities through effective processes that had an impact on learning, teaching and wellbeing outcomes. This does not imply that the journey to school improvement is without its setbacks or devoid of tension and conflict. Nonetheless, the research has maintained my professional and personal engagement and interest in the evolving nature of education. within rural, regional and remote education Dioceses and what lessons can be learnt that work to shift these disadvantages to alleviate cumulative disadvantages in society.

## 8.6 Implications and Recommendations for Theory and Practice

There are numerous implications that stem from this study. First and foremost, it adds to the discourse on the school improvement ecosystem, with the role of relationships and how these influence school improvement processes at its core. Therefore, this research is of interest to researchers and policy makers to further their understanding of how school and system leaders work together to use processes to enact school improvement. Linking the concept of a school improvement ecosystem to processes has the potential to help understand how resources and knowledge is gathered, disseminated, and allocated in upcoming endeavours for school improvements. Additionally, this study has showcased the diverse ways in which the strength of relationships can emerge in creative, sustaining, and transformative activities within the system simultaneously. Therefore, the research adds to the empirical evidence

regarding organisational ecology and Branson and Marra's (2022) original taxonomy of school improvement work and how "the quality of relationships becomes the pivotal focus of the review, it becomes possible to provide a rich array of data-informed knowledge about what is currently working well within the school as well as what and how the school can achieve important improvements" (p. 8).

Secondly, the development of the concept of a school improvement ecosystem that draws on the concept of a micro level, meso level and macro level, enables an understanding of how systems thinking promotes processes and strategies that ensure synergies, thereby maximising the impact of school improvement strategies by leveraging available resources (Sharma et al, 2022). School improvement in highly bureaucratic environments occurs when individuals are open to perspectives beyond their own beliefs or principles, embracing the interconnectedness of relationships to foster a novel, emerging concept of an ecological system. Consequently, this study contributes to dialogues in educational policy concerning the role of improvement science , continuous improvement and change management processes and the application of these into the education sector. The current reality demonstrates that when school improvement is not carefully considered, school improvement is difficult to achieve. The school improvement ecosystem offers a variety of processes that can showcase different viewpoints, which may result in a fragmented approach to enhancing school effectiveness. Policymakers and practitioners, including school and system leaders, ought to recognise the interdependent nature of these relationships and consider how they might collaboratively utilize these processes within the school improvement ecosystem.

Thirdly, this research contends that the essence of school improvement is dynamic and ever-changing. While Hopkins (2022) may depict an ideal model of school improvement featuring interdependent components, relationships, and interconnected processes and standards, resembling a precise bureaucratic representation, this study extends beyond such a depiction. This ideal type of school improvement is more in line with an understanding of operating within a school improvement ecosystem. It reports on a period of time in a rural, regional and remote Diocese and a particular Strategic plan that was focussed on the introduction of school improvement processes whose ultimate goals were to improve learning, student and wellbeing outcomes. The shift to a focus on evidence of impact makes school improvement processes beyond the conventional frameworks of school improvement, which are often relegated to secondary status compared to more celebrated educational concepts like learning. Both efficiency and effectiveness are essential components. Thus, it's crucial to acknowledge that in addition to the interdependent ideal ecosystems suggested by

Branson & Marra (2022), a deeper comprehension of the distinctive school improvement ecosystem at play within a specific context is necessary for a meaningful interpretation of school improvement's nature.

Finally, this research opens avenues for conjecture about the future roles of school and system leaders. This study has illustrated that leadership and management practices have been assimilated into the mainstream, gaining acceptance. Part of system work, a problem nonetheless remains in the educational policy sphere where there is a misrecognition about consensus in theoretical terms that the organisational and interactional structure of multi-level education systems, as well as the varying social contextual conditions of schools, must be taken into account as relevant influencing factors. And yet these organisational structures will survive because system leaders have not yet identified a novel approach for structuring these processes. Diminished autonomy and a limited scope in the evolution of knowledge or processes that underpin notable innovations could lead to profound changes in the character of the profession. Allowing school and system leaders the liberty to determine their own developmental agendas in their respective fields may give rise to challenges that are both cultural and ideological in nature, as Feldorff and colleagues (2022) describe, and this will be continually subject to changing forces.

One such force as described by Branson and Marra (2022), who argue that as schools become more complex and continue to adapt, "effective leadership capacity is the most important and essential skill that the school leader must have because they are perceived to be the causal agent in the for the success and failure in a school's environment" (p. 172).

This notion might serve as a point of discussion for leadership and management curricula that lean towards project management styles of educational leadership, or it could contribute to broader dialogues about holistic educational practices that extend beyond conventional school improvement measures. Currently, there is a void in systems-level training for these management practices. This gap could either narrow further, or it may invite leadership from various professional backgrounds to partake in school and system administration, as observed in the growing professionalisation and bureaucratic expansion within the realm of school and system leadership — a development that often places restrictive demands on their roles.

In parallel, might the educational sector be compelled to adjust to the demands of system leaders and those who control resources, as well as to the outcomes emanating from the Strategy? Consequently, the professional identity of school and system leaders may simultaneously be enriched and constrained by specialisation, external encroachment, and a

deficiency in school improvement process training. The implications of such developments are particularly pertinent for those invested in the role that system and school leaders have in delivering educational services, including policymakers and scholars.

## 8.7 Recommendations for Teachers

In this section, I present a comprehensive set of recommendations for teachers aimed at enhancing their professional practices and fostering positive outcomes within the educational setting. These recommendations are based on an in-depth analysis of conversations and research conducted in the field of education. Recognising the critical role teachers play in student learning and development, these recommendations encompass various aspects, including the cultivation of positive relationships, the promotion of a culture of continuous improvement, the utilisation of data analysis for informed decision-making, and the importance of ongoing professional learning. By implementing these recommendations, teachers can effectively contribute to school improvement efforts, create meaningful learning experiences for students, and establish a supportive and collaborative classroom environment. This section serves as a valuable resource for teachers, offering practical guidance to enhance their instructional practices and ultimately optimise student outcomes.

### *8.7.1 Positive Relationships*

- Develop a shared understanding of the school's vision and goals among all stakeholders, including students, parents, fellow teachers, school and system leaders.
- Emphasise the importance of building positive relationships with teacher colleagues, school leaders, system leaders and parents. Foster a culture of trust and collaboration within the Catholic Professional Learning Community (CPLC). The frequent mention of "learning" and "people" from study participants emphasises the importance of continuous learning and collaboration.
- Foster shared accountability and build strong teams to promote consistency and alignment in teaching practices and collaboration strategies such as co-planning, co-teaching, co-debriefing, and co-reflecting with colleagues.
- Actively participate in the co-design process, contributing to decision-making and shaping school improvement initiatives.
- Embrace a collaborative approach within the CPLT and school, as well as across other schools in rural, regional, and remote areas. Share successful strategies, resources, and experiences to collectively improve student outcomes.

- Build strong networks with other teachers, school and system leaders, educational organisations such as Catholic Schools New South Wales, and community stakeholders. These networks can facilitate the exchange of best practices, resources, and support for implementing innovative programs.
- Embrace the concept of scalability and consider its application in classroom practices. Look for opportunities to adapt and grow teaching strategies to meet the unique needs of students.

### *8.7.2. Culture of Continuous Improvement*

- Promote a "Culture of Continuous Improvement" by emphasising the macro, meso and micro cycles of the school improvement ecosystem and encouraging its consistent application. The research points to the cycle being a prominent part of the school improvement process.
- Continuously improve problem-solving skills by applying systematic methods and approaches like root cause analysis, PDCA (Plan, Do, Check, Act), A3 (A3 Report), fishbone diagram, and 5 Whys.
- Seek continuous improvement of learning and teaching by analysing student data, reflecting on macro, meso and micro processes, and implementing evidence-based changes.
- Familiarise with the concept of a school improvement ecosystem, its components, and their interconnectedness. This understanding will help recognise roles and identification of processes within the broader ecosystem and promote collaboration and mutual support.

### *8.7.3 Data Analysis*

- Promote data-driven decision-making among teachers by emphasising the value of using data to inform instructional practices, identify areas for improvement, and drive student achievement. Provide ongoing support and resources from school leaders to help teachers effectively collect, analyse, and interpret data.
- Equip teachers through CPLCs with the necessary skills and knowledge in data analysis by offering professional development opportunities focused on data literacy and data analysis techniques. Provide training on data collection methods, data visualisation tools, and data interpretation strategies to enhance teachers' proficiency in using data to inform their instructional decisions.

- Foster a collaborative and supportive environment where teachers can engage in data discussions and share best practices. Encourage teachers to collaborate and learn from each other by creating opportunities for data-driven discussions, peer observations, and sharing of successful data-driven instructional strategies.
- Utilise tools and methods such as Pareto charts, Ishikawa diagrams, control charts, scatter diagrams, histograms, flowcharts and value stream mapping to facilitate data analysis. Train teachers on the practical application of these tools to identify patterns, trends, and root causes in student data, allowing for more informed decision-making.
- Establish a comprehensive data infrastructure that enables teachers to access and analyse relevant student data easily. Implement data management systems and tools that allow for efficient data collection, organisation and analysis. Provide teachers with user-friendly data analysis platforms, such as Microsoft Power BI or similar tools, to facilitate data exploration, visualisation and the utilisation of tools and methods mentioned above.
- Monitor and evaluate the impact of data-driven decision-making on teaching and learning outcomes. Regularly assess the effectiveness of data-driven instructional practices and their impact on student achievement. Use feedback and data analysis to refine and improve data-driven decision-making processes, ensuring continuous growth and improvement.

### *8.7.4 Improve Learning and Teaching*

- Focus on implementing effective literacy and numeracy blocks to promote student achievement. This includes selecting and implementing research-based approaches and programs that support the development of literacy and numeracy skills in students.
- Embrace the learning and teaching cycle by encouraging teachers to actively utilise the learning and teaching cycle, which involves using data to lead learning, implementing targeted teaching strategies, providing focused feedback and using strong assessments. Teachers can further enhance student learning outcomes by leveraging this cycle to personalise instruction and address individual student needs.
- Explore co-teaching opportunities: Co-teaching has shown promising potential in improving teacher collaboration and increasing student engagement (Sharratt, 2022). Teachers should seek opportunities for collaborative planning, teaching, debriefing

and reflecting with their colleagues. This approach allows for the sharing of resources and expertise, leading to enhanced teaching practices and improved student outcomes.

- Utilise data to lead learning, set learning intentions and success criteria, provide effective feedback and assess student progress. Teachers should collect and analyse data to inform their learning and teaching processes, set clear learning goals, provide targeted feedback to students, and regularly assess student progress to ensure effective learning outcomes.
- Enhance assessment processes by enabling teachers to develop strong assessment practices that align with learning objectives and which provide valuable insights into student progress. This includes utilising formative and summative assessments, leveraging data to inform instruction, and providing targeted feedback that supports student growth.
- Encourage the establishment of a regular self-reflective practice, where teachers can assess their co-teaching strategies and improve over time. Actionable opportunities for future research might include identifying strategies to improve teachers' reflective practices in the context of co-teaching.
- Explore contemporaneous research on effective programming, curriculum design and learning and teaching processes to ensure learning goals and evidence of impact are met. This involves staying informed about the latest research and best practices in education, and incorporating evidence-based strategies into classroom instruction.
- Seek guidance and support from Leaders of Pedagogy (LOP) to enhance teaching practices and improve student outcomes. Collaborating with LOPs and SMEs can provide valuable insights, feedback and support to help teachers refine their learning and teaching processes and create optimal learning environments for students.

### *8.7.5 Professional Learning*

- Deepen understanding of the school improvement ecosystem at the micro, meso and macro levels. Understanding the broader picture can better equip them to implement improvements at the classroom level.
- Take advantage of professional development opportunities focused on effective instructional strategies, assessment techniques and classroom management.
- Engage in continuous learning and development through participation in professional learning communities, workshops, and other opportunities for growth.

- Seek professional development opportunities that focus on effective collaboration, sharing of best practices and capacity-building within the school improvement ecosystem. This can enhance their ability to engage in collaborative processes and contribute to school-wide improvement efforts.
- Enhance skills in data analysis and literacy to effectively evaluate student progress and inform learning and teaching processes.
- Foster the structure of CPLC in schools for teachers to share best practices, instructional strategies, and resources. Encourage regular meetings and discussions focused on improving student outcomes within the school improvement ecosystem.

### *8.7.6 Summary*

In conclusion, this section has provided a comprehensive array of recommendations for teachers to support their professional growth and positively impact student learning. By embracing these recommendations, teachers can create a conducive learning environment that fosters student engagement, achievement, and overall well-being. The recommendations highlight the significance of positive relationships, collaborative practices and implementation science. Additionally, they emphasise the importance of data-driven decision-making, effective use of instructional strategies and ongoing professional learning. By implementing these recommendations, teachers can enhance their instructional practices, promote student success and contribute to the broader school improvement efforts. It is essential for teachers to recognise their pivotal role in shaping the educational landscape and to continually reflect on their practices, seek professional growth opportunities and embrace innovative approaches to meet the diverse needs of their students. Through their dedication and commitment to excellence, teachers have the potential to make a lasting and transformative impact on the lives of their students and the overall educational community.

In the unique environments of rural, regional, and remote schooling communities, teachers face distinct challenges and opportunities that require specific attention. This set of recommendations underscores the importance of adapting teaching strategies to meet diverse student needs, leveraging local community resources and fostering strong connections beyond the classroom. Teachers are encouraged to innovate within their pedagogical approaches, considering the vast cultural and socio-economic diversity present in these areas. Emphasising collaboration, teachers should seek to build networks with peers across similar contexts to share resources, strategies, and support. Furthermore, professional learning tailored to the realities of rural, regional, and remote settings can equip teachers with the

skills necessary to navigate the specific challenges they face, including limited access to resources and professional learning opportunities. By focusing on these areas, teachers can enhance their impact, contributing to a vibrant learning community that supports all students' success, regardless of their geographical location.

## 8.8 Recommendations for School Leaders

School leaders play a crucial role in driving and facilitating school improvement efforts. As the guiding force behind the educational institution, they are responsible for creating a positive and supportive school environment, fostering a culture of continuous improvement, and promoting effective teaching and learning practices. To fulfil these responsibilities, school leaders need to possess a diverse set of skills and competencies, ranging from building strong relationships with stakeholders to utilising data for informed decision-making. This section presents a comprehensive set of recommendations for school leaders, drawing upon insights from extensive conversations and research conducted with education experts and practitioners. These recommendations encompass various aspects, including fostering positive relationships, cultivating a culture of continuous improvement, leveraging data analysis, improving learning and teaching, and supporting ongoing professional learning. By implementing these recommendations, school leaders can effectively lead their schools towards excellence, ensuring optimal student outcomes and providing a nurturing environment for growth and success.

### *8.8.1 Positive Relationships*

- Prioritise building positive relationships with teachers, school leaders and system leaders to foster a supportive and inclusive school and system culture. This involves creating a culture of trust, collaboration and shared accountability among staff members by promoting teamwork, shared decision-making and participatory processes.
- Encourage school leaders to engage with the network of stakeholders around them, drawing upon their perspectives and expertise to drive improvement initiatives.
- Build robust relationships with all teachers, school leaders and system leaders, as highlighted throughout the PDCA cycle.
- As a school leader, ensuring buy-in and being fully invested in the strategy is essential. Showing commitment and active participation can inspire others in the school community to do the same.

- School leaders should be engaged in the expansion process of the Data Ecosystem to ensure its smooth integration with existing school systems.
- Establish effective communication channels to encourage dialogue, idea sharing, and collaboration among all stakeholders.
- Build strong networks with other school leaders, educational organisations and community stakeholders to exchange processes, resources, and support for implementing innovative programs.
- Foster a supportive and collaborative school improvement ecosystem by promoting system-led collaboration.

### *8.8.2 Culture of Continuous Improvement*

- Foster a culture of continuous improvement by providing professional development opportunities, recognising achievements and promoting a growth mindset among staff members.
- Develop and promote effective leadership practices that drive and facilitate change. This can involve implementing strategies and techniques to inspire and manage teams towards a common goal, considering factors like timing, opportunity, leadership and transformation.
- Facilitate effective time management practices to provide teachers and staff with dedicated time for planning, collaboration and professional development.
- Implement systems for continuous improvement, such as regular data analysis and feedback loops, to identify areas of improvement and make evidence-based decisions.
- Foster a culture of shared leadership by empowering teacher leaders and distributing decision-making responsibilities. Provide training and support to build leadership capacity at all levels within the school.

### *8.8.3 Data Analysis*

- Emphasise the importance of data-driven decision-making and provide support, professional learning and resources for educators to effectively collect, analyse and utilise data to inform instructional practices.
- Utilise the Data Ecosystem to drive decisions at the school level, such as curriculum development, resource allocation and teacher training. Develop data literacy skills to effectively analyse student data and identify areas for improvement.
- Advocate for the benefits of data-driven decision-making and effective use of the Data Ecosystem to the school community, including teachers, parents, and students.

- Foster a culture of data-informed instruction by encouraging teachers to utilise data to inform their teaching practices and promote a data-informed culture within the school by utilising visualisations, tools and methods such as Pareto charts, Ishikawa diagrams, control charts, scatter diagrams, histograms, flowcharts, and value stream mapping.
- Strengthen data-driven decision-making through the use of system-level tools and support for teachers in utilising data effectively.

### *8.8.4 Improve Learning and Teaching*

- Establish instructional leadership teams and provide resources and support for teachers, focusing on areas such as effective classroom practices, pedagogical growth, and innovative teaching strategies.
- Support alignment of curriculum, assessment and reporting practices to ensure coherence and synchronisation across the school.
- Encourage collaboration and sharing of processes among teachers through co-planning, co-teaching and professional learning communities.
- Foster a positive and supportive school culture that promotes engagement with school improvement initiatives and values the importance of high-quality teaching and learning.

### *8.8.5 Professional Learning*

- Provide ongoing professional development opportunities that specifically address the components of the school improvement ecosystem, such as leadership development, effective collaboration strategies and data analysis skills.
- Establish a comprehensive professional development program that addresses the specific needs of teachers and aligns with the goals of the school improvement ecosystem. Offer ongoing training, coaching, and mentoring opportunities.
- Foster a culture of continuous learning and professional growth by encouraging teachers to actively engage in professional learning communities, workshops, and other opportunities for growth.

### *8.8.6 Summary*

In conclusion, school leaders play a critical role in shaping the trajectory of their schools and driving meaningful improvement. The recommendations presented in this section provide

valuable insights into the key areas where school leaders can focus their efforts to create a positive and impactful learning environment. By fostering positive relationships, school leaders can establish a culture of trust and collaboration among stakeholders, leading to enhanced engagement and shared accountability. Cultivating a culture of continuous improvement empowers teachers and staff to continuously reflect on their practices, implement evidence-based changes, and strive for excellence. Leveraging data analysis equips school leaders with valuable insights to make informed decisions, identify areas for improvement and drive evidence-based practices. Improving learning and teaching practices through instructional leadership and support ensures that students receive high-quality education and achieve their full potential. Lastly, supporting ongoing professional learning enables school leaders to stay current with best practices, promote collaboration, and develop the skills and knowledge necessary for effective leadership.

By embracing these recommendations, school leaders can navigate the complex landscape of educational improvement and lead their schools towards success. However, it is important to recognise that the implementation of these recommendations requires dedication, collaboration and a commitment to continuous growth. It is a collective effort involving teachers, staff, students, parents and the broader school community. Future research and exploration of these recommendations can further enhance our understanding of effective school leadership and contribute to the advancement of educational practices. With visionary and dedicated school leaders at the helm, schools can become thriving hubs of learning, fostering the holistic development and success of every student they serve.

School leaders within rural, regional, and remote contexts are pivotal in shaping an educational environment that acknowledges and leverages the unique characteristics of their communities. This set of recommendations highlights the need for school leaders to cultivate a culture of inclusivity and resilience, recognising the specific logistical, cultural, and resource-based challenges present in these areas. Additionally, creating a supportive network among schools in similar contexts can offer mutual support, sharing of best practices and collaborative problem-solving. School leaders should advocate for and implement targeted professional leaders that address the unique needs of educators in these settings, focusing on strategies to engage and support diverse student populations effectively. By prioritising these recommendations, school leaders can ensure their schools are centres of excellence that reflect and celebrate the uniqueness of their communities.

## 8.9 Recommendations for System Leaders

System leaders play a critical role in driving and guiding educational systems towards excellence and continuous improvement. As the leaders overseeing multiple schools, they have the responsibility to support a shared vision for scalability and school improvement, foster collaboration and knowledge sharing among schools, and create a supportive policy environment. System leaders also need to cultivate a culture of continuous improvement, establish robust data analysis systems, and prioritise research and development. To fulfill these responsibilities, system leaders should possess a diverse range of skills and competencies, including strategic planning, resource allocation, policy development and stakeholder engagement. This section presents a comprehensive set of recommendations specifically tailored for system leaders, drawing upon insights from extensive conversations and this particular case study conducted with school and system leaders. These recommendations encompass various aspects, such as fostering positive relationships, promoting a culture of continuous improvement, leveraging data analysis, enhancing learning and teaching and supporting ongoing professional development. By implementing these recommendations, system leaders can effectively lead their educational systems towards excellence, ensuring optimal student outcomes and fostering an environment of innovation and continuous growth.

### *8.9.1 Positive Relationships*

- Continuously support and communicate the vision for scalability and school improvement by ensuring coherence in policies and practices across the system.
- Foster a culture of innovation by allocating resources and funding for research on effective teaching practices and program design.
- Facilitate collaboration, communication and knowledge sharing among schools to promote alignment and coherence at macro, meso and micro level processes.
- Create policies that provide flexibility and support for innovative practices, including additional resources, specialised programs and incentives to attract and retain high-quality teachers.
- Establish mechanisms for sharing best practices and fostering collaboration among schools to encourage cross-learning and innovation.
- Actively seek partnerships with community organisations, businesses and stakeholders to enhance the school improvement ecosystem and provide additional resources and support.

- Promote collaborations and shared learning among different schools in the system to foster a sense of 'systemness'.
- Encourage collaboration and knowledge-sharing among schools and educators through networking events, conferences and online platforms.

### *8.9.2 Culture of Continuous Improvement*

- Develop comprehensive policies and frameworks that support and enhance leadership practices, teamwork, collaboration and instructional practices across all schools within the system.
- Monitor and evaluate school improvement initiatives to identify areas of success and areas that need further attention.
- Foster a culture of continuous improvement within the education system by prioritising quality, efficiency, and productivity, and by providing support for ongoing evaluation and refinement of policies and processes.
- Regularly review and refine strategic plans based on the analysis of key system health indicators, involving all stakeholders to ensure alignment and buy-in.
- Create a co-designed process that involves schools and system leaders in decision-making and planning for school improvement initiatives.
- Promote policy alignment and coherence, continuously reviewing and updating policies to eliminate barriers and promote effective implementation.
- Develop a project management culture to effectively coordinate and implement school improvement work across different contexts.
- Ensure accountability within wider stakeholder engagement processes, involving system leaders responsible for facilitating collaboration and resource mobilisation.
- Support school leaders and teachers in accessing resources and funding necessary for successful implementation of improvement initiatives.
- Provide resources and support for effective time management practices, collaboration, planning and professional development.
- Allocate adequate resources, including funding, professional development opportunities and technological infrastructure, to support school improvement initiatives and ensure equitable access for all schools.
- Establish a framework for moderation and reporting to ensure consistency and fairness in assessment practices.

- Provide comprehensive support and resources to implement effective school improvement strategies, including professional development opportunities, funding for research-backed interventions and networks for knowledge sharing and collaboration among schools.

### *8.9.3 Data Analysis*

- Invest in robust data ecosystems that provide relevant, timely data for informed decision making at all levels within the system.
- Leverage data-driven decisions to make informed decisions and set strategic directions.
- Establish data collection and analysis systems to monitor and evaluate school performance, identifying areas of improvement and providing targeted support.
- Implement data ecosystems at the system level to facilitate the collection, analysis and reporting of data, providing valuable insights for system-wide improvement initiatives.

### *8.9.4 Improve Learning and Teaching*

- Assess the impact of specific strategies on student outcomes, particularly within the context of the PDCA cycle.
- Provide resources and support for professional development programs that address the specific needs of teachers in areas such as programming, pedagogy and assessment.
- Encourage and support research initiatives that evaluate the effectiveness of different learning and teaching processes, problem-solving methods and improvement techniques within school improvement ecosystems.
- Explore the impact of distributed leadership models on teacher empowerment, school climate and student outcomes.
- Invest in professional learning opportunities for system leaders to enhance their understanding of school improvement processes, context and evidence of impact.

### *8.9.5 Professional Learning*

- Prioritise research and development initiatives that address the identified limitations and gaps in the current conversation, supporting research projects that evaluate the effectiveness of specific interventions and explore innovative teaching and learning approaches.

- Allocate resources and support for professional development opportunities focused on targeted teaching, data use, and effective feedback practices, including funding, time and access to relevant training programs.
- Invest in research and evaluation studies to assess the effectiveness of school improvement strategies at the system level, collaborating with researchers and educational institutions to identify evidence-based practices.
- Provide resources and support for professional development programs and resources that address problem-solving techniques, data analysis skills, and improvement techniques for educators at all levels.
- Conduct longitudinal studies to track the long-term impact of system-level policies on school improvement ecosystems.
- Strike a balance between standardisation and autonomy, allowing space for local contextualisation, and conducting more research to understand how to effectively balance these elements in different educational contexts.

### *8.9.6 Summary*

In conclusion, system leaders play a pivotal role in driving and guiding educational systems towards excellence and continuous improvement. By implementing the recommendations provided in this section, system leaders can effectively fulfill their responsibilities and create an environment conducive to system-wide growth and success. These recommendations emphasise the importance of fostering positive relationships, promoting a culture of continuous improvement, leveraging data analysis, enhancing learning and teaching, and supporting ongoing professional development.

By fostering positive relationships and collaboration among schools, system leaders can promote alignment and coherence in teaching and learning practices, creating a supportive network for improvement. Cultivating a culture of continuous improvement ensures that the educational system remains focused on quality, efficiency, and productivity, with regular monitoring and evaluation of school improvement initiatives. System leaders should prioritise the establishment of robust data analysis systems to inform decision-making at all levels of the system. By leveraging data, they can make informed decisions, set strategic directions, and identify areas of improvement for targeted support. Improving learning and teaching requires providing resources and support for professional development programs that address the specific needs of educators. By prioritising research and development

initiatives, system leaders can identify evidence-based practices and address limitations and gaps in the current educational landscape.

Finally, ongoing professional development opportunities for system leaders are crucial for enhancing their understanding of school improvement processes, context and evidence of impact. By continuously developing their leadership skills, system leaders can effectively drive system-wide improvement initiatives and facilitate collaboration among schools.

By implementing these recommendations, system leaders can effectively lead their educational systems towards excellence, ensuring optimal student outcomes and fostering an environment of innovation and continuous growth. The pursuit of these recommendations will contribute to the ongoing improvement and success of educational systems, benefiting students, educators, and the broader community.

In addressing the unique contexts of rural, regional, and remote schooling communities, these recommendations for system leaders underscore the importance of strategic adaptability and the necessity for context sensitivity. These communities face distinct challenges, including limited resources, professional isolation, and serving widespread populations with diverse needs. Therefore, system leaders must ensure their strategies are not only aligned with broad educational excellence and improvement goals but also address the specific conditions and potential of these areas. Investments might be directed towards technological and infrastructural advancements to mitigate geographical barriers, alongside developing professional learning tailored to educators in these locales. Moreover, fostering robust networks is crucial to connect isolated schools and advocate for policies and resources specifically supporting rural, regional, and remote education. By customising these recommendations to the particular demands and strengths of rural, regional, and remote communities, system leaders can cultivate an educational system that champions inclusivity, equity, and the delivery of quality education to all students, irrespective of geographical constraints.

### 8.10 Future Recommendations for Further Study

Without revisiting the aforementioned limitations that discussed the necessary constraints of any research study, there are still lessons to be learned for future research practice. Those limitations discussed in Chapter 8.4 which were beyond the scope of this case study protocol should make consideration or seeing how the outcomes of the Strategic Plan 2018-2020 were being implemented in practice. Once embedded within schools and developed in the shape of

the Non-Negotiables of a Catholic Professional Learning Community (2018), what has been achieved, and continues to evolve with teachers, school leaders and systems in this rural, regional and remote Diocese remains and continues to be of interest five years into the journey. This study has provided valuable insights into the dynamics involved in the implementation and impact of school improvement ecosystems. However, there are several areas that warrant further investigation to deepen our understanding and inform future practice. The following recommendations highlight potential avenues for future research in the field of school improvement:

1. Investigate the impact of system-level policies on the implementation of school improvement ecosystems: It is crucial to delve deeper into how different policies and strategies enacted at the system level influence the adoption, implementation and sustainability of school improvement ecosystems. By conducting comprehensive research, we can gain insights into the specific policy frameworks that create an enabling environment for successful implementation. For example, examining the alignment between policy objectives, resource allocation, and school improvement initiatives can shed light on the critical factors that contribute to effective implementation and desired outcomes.
2. Examine the effectiveness of different professional learning community models and strategies for enhancing teacher collaboration and professional growth. Further exploration is needed to understand the diverse models and strategies of professional learning communities and their impact on collaboration, knowledge sharing, teacher growth and student outcomes. This research can involve detailed case studies, quantitative analysis, and qualitative investigations to identify the characteristics and practices of successful professional learning communities. Understanding the most effective models and strategies can inform the design and implementation of professional learning communities that foster collaborative cultures and support ongoing teacher development.
3. Study the role of instructional leadership and its impact on teacher development and student achievement. Investigating the practices and behaviours of effective instructional leaders is crucial for promoting teacher development and improving student achievement. This research can involve exploring the specific leadership practices, decision-making processes, and supportive behaviours that positively influence instructional quality. Examining the relationships between instructional

leadership, teacher professional growth, and student outcomes can provide valuable insights into the actions and competencies that effective leaders employ to drive educational improvement.

4. Investigate the impact of leadership styles and practices on teacher job satisfaction, retention, and learning and teaching quality. Understanding the influence of different leadership styles and practices on teacher outcomes and instructional quality is essential for creating supportive work environments and enhancing educational outcomes. This research can involve quantitative surveys, interviews and observations to assess the relationship between leadership styles (such as transformational, instructional or distributed leadership) and important factors like teacher job satisfaction, retention rates and instructional effectiveness. By identifying effective leadership practices, educational leaders and policymakers can develop targeted training programs and initiatives to enhance leadership capacity at all levels.
5. Explore the role of school and system leaders in promoting teacher collaboration and creating a culture of continuous improvement. Investigating the specific practices and strategies employed by school and system leaders to foster collaboration and create a culture of continuous improvement can provide insights into effective leadership behaviours. This research can involve studying successful leadership approaches, communication strategies, and collaborative structures that empower teachers to work together, share expertise, and engage in continuous professional growth. By understanding the role of leaders in cultivating collaborative cultures, educational systems can better support teachers in improving their instructional practices and student outcomes.
6. Examine the impact of system-level policies and support structures on school improvement outcomes. Research should focus on understanding how system-level policies and support structures influence school improvement outcomes, such as student achievement, teacher professional growth and school climate. This research can involve large-scale quantitative studies, comparative analyses and policy evaluations to assess the impact of specific policy interventions, funding mechanisms and support systems on school improvement efforts. By examining the relationship between policy frameworks, resource allocation, and desired outcomes, policymakers can make informed decisions and adjustments to optimise system-level support for schools.

7. Conduct longitudinal studies to examine the long-term impact and sustainability of the school improvement strategy discussed in Chapters 5-7, tracking its effects on student outcomes, teacher professional growth and school success over time. Longitudinal studies are essential to understanding the enduring impact and sustainability of educational improvement initiatives. By tracking the progress and outcomes of school improvement strategies over an extended period, researchers can assess the long-term effects, identify potential challenges or obstacles to sustainability, and determine factors that contribute to lasting positive change. Longitudinal research can provide valuable insights into the dynamic nature of school improvement and guide the development of strategies that have a lasting impact on student achievement and overall school success.
8. Investigate the effectiveness of different strategies for fostering collaboration and communication among schools within a system. It is important to explore and evaluate various strategies that promote collaboration and communication among schools within a system. This research can involve studying successful collaborative structures, networking platforms, and professional learning communities that facilitate knowledge sharing and best practice dissemination among schools. By understanding the most effective strategies for promoting collaboration at the system level, educational systems can create a supportive environment that fosters collaboration, improves instructional practices and enhances student outcomes.
9. Explore the impact of resource allocation strategies at the system level on school improvement efforts and equitable outcomes. Investigating how resource allocation strategies impact school improvement efforts and equitable outcomes is crucial for promoting fairness and ensuring that all students have access to high-quality education. This research can involve analysing resource distribution models, examining the allocation of funding, personnel, and other resources, and assessing their impact on student achievement, teacher effectiveness, and school success. By identifying equitable resource allocation strategies, policymakers can work towards reducing educational disparities and promoting equal opportunities for all students.
10. Analyse the role of technology and data ecosystems in facilitating school improvement, examining their impact on the macro, meso, and miso levels and overall learning and teaching outcomes. Exploring the role of technology and data ecosystems is vital as educational systems increasingly integrate technology into their improvement efforts. This research can involve studying the integration of

technologies like learning management systems, data analysis tools, and adaptive learning platforms to support data-driven decision-making, personalised instruction and continuous improvement. By investigating the impact of technology on different levels (macro, meso, and micro) and its effects on learning and teaching outcomes, researchers can provide evidence-based guidance on effective technology integration strategies for educational improvement.

11. Examine the influence of external factors, such as socio-economic conditions and community engagement, on school improvement efforts within a system. Investigating the influence of external factors on school improvement efforts can shed light on the contextual challenges and opportunities faced by educational systems. This research can involve analysing how socio-economic conditions, community demographics and community engagement impact school improvement outcomes. By understanding these external influences, policymakers and educators can develop targeted strategies and interventions that address the unique needs and contexts of schools and communities, ultimately leading to more effective improvement efforts and equitable outcomes.
12. Study the implementation and effectiveness of leadership processes in different school contexts. To understand the nuanced nature of leadership processes, it is important to investigate their implementation and effectiveness in diverse school contexts. This research can involve examining how leadership processes, such as distributed decision-making, instructional coaching, or collaborative goal-setting, are implemented and adapted in different school settings. By exploring the contextual factors that influence the implementation and effectiveness of leadership processes, researchers can provide valuable insights into how leadership practices can be tailored to specific school contexts, leading to more successful improvement efforts and positive outcomes.

By addressing these areas of research, we can deepen our understanding of effective educational improvement practices, inform policy and practice, and contribute to the ongoing enhancement of school improvement ecosystems. These future research endeavours will ultimately support the goal of improving educational outcomes for all students and fostering a culture of continuous improvement in educational systems.

What are the roles of system and school leaders within the education system? School and system leaders can lead CPLC at a school and a system level, larger systems within other

rural, regional and remote contexts in ensuring that school improvement processes within a school improvement ecosystem are considered. While participants shared their perspectives on the Strategy's outcomes, the ongoing effects on altering school improvement processes, learning, and teaching for better wellbeing outcomes remain a focal point for policymakers, as well as school and system leaders. Thus, the immediate practices and enduring impacts of the Strategy, though not within this study's remit, continue to be significant for those considering the long-term perspective of the dynamics within a school improvement ecosystem, and the evolving roles and identities of leaders responsible for school improvement. Additionally, the principles underlying the school improvement ecosystem warrant further exploration beyond this research and its specific setting to assess their applicability and impact in broader professional and systemic contexts. Such an inquiry is essential for a more profound comprehension of how these principles and processes can be applied and scaled in other educational system environments that are larger and metropolitan.

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## Appendix A: Interview Schedules

Round One Focus: Becoming Part of the School

1.How did you join this rural, regional or remote school?

2.What previous leadership roles have you held in schools?

3. How long have you been at this school?

4. What types of schools did you work in before?

5. Describe a key moment that led you to join this remote school.

6. What motivated you to apply for a position at this remote school?

Round Two Focus: Enacting Change

1.(For all participants) What qualities are crucial for successful leadership in a rural, regional and remote school?

2. Can you share an experience during the School Improvement Strategy that reflects your values?

3. Describe a situation where you felt you made the most positive change.

4. How has your leadership evolved over time?

5. Have external factors influenced your leadership?

Round Three Focus: Changes Over the Year and Leadership in the Diocesan System

1.What changes have occurred in the school or your role in the past year?

2. Are there proposed changes to the school?

3.How has your relationship with the Diocesan Office evolved?

4.What impact has remoteness had on your leadership?

5.Are you collaborating with other remote schools?

6. How do you respond to negative portrayals of remote schools?

Final reflections on school leadership:

7.What would you do differently if you could go back?

8.Use a metaphor to describe your leadership style.

9.Predict the future of remote schools.

10. Would you consider moving to a different type of school?

Follow Up Questions

1. Things you remember about the strategic direction 2018-2020 and the processes?

2. What were some of the key processes?

3. What did you do when these processes occurred?

4. What is your view on the processes?

5. How would you describe the processes?

6. What were the outcomes of the processes?

Probe unofficial outcomes, i.e. benefits, legacies etc.

7. Are there any other areas regarding the processes that you wanted to talk about that we may not have been covered?

8.Probe current developments / latest thoughts

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## Appendix B: Access to School Improvement Exploratory Data Analysis Portal

This appendix serves as a guide to the School Improvement Exploratory Data Analysis Portal, which complements the research findings presented in this thesis. Below is a detailed overview of the portal's contents and instructions for navigation.

### 1.1 Portal Overview

The portal is an interactive tool designed to visually and analytically explore the data surrounding school improvement initiatives in rural, regional, and remote Catholic schools. Figure A1 sets out the landing page for the School Improvement Exploratory Data Analysis.

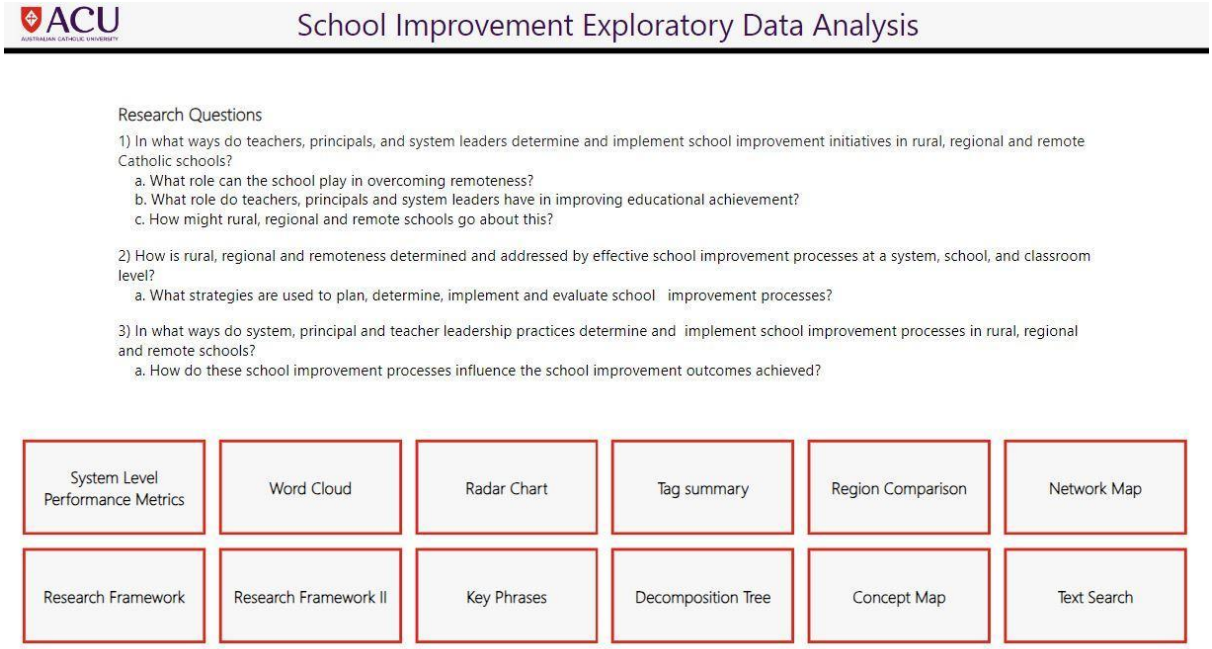


**Figure A1:** *School Improvement Exploratory Data Analysis Portal*

The portal is structured to provide insights into several research questions, with the following interactive reports available for in-depth analysis:

- **System Level Performance Metrics:** Displays key performance indicators across different school systems.
- **Word Cloud:** Highlights the most frequently occurring terms within the data set.
- **Radar Chart:** Offers a comparative analysis of variables within a radial layout.

- **Tag Summary:** Summarises categorised insights derived from qualitative data analysis.
- **Region Comparison:** Allows for the comparison of school improvement metrics across various regions.
- **Network Map:** Visualises the relationships and network structures within the data.
- **Research Framework I & II**: Outlines the theoretical frameworks that guide the data analysis process.
- **Key Phrases:** Identifies and lists critical phrases from the data set.
- **Decomposition Tree:** Breaks down hierarchical data structures for detailed examination.
- **Concept Map:** Presents a visual representation of the relationships between different concepts identified in the study.
- **Text Search:** Enables keyword search within the data set for targeted information retrieval.

### 1.2 Instructions for Use

To access and interact with the reports:

1. Request access from Justin Matthews on 0415 649 892. Justin will provide access by way of a secure email address.
2. Visit the online portal at Australian Catholic University: School Improvement Exploratory Data Analysis Portal
3. Navigate through the portal using the menu on the left-hand side to select the desired report.
4. Interact with the reports by clicking on elements to drill down for more information, or hover to display detailed data points.
5. Use the search functionality for locating specific terms or phrases within the reports.

### 1.3 Navigational Tips

1. A stable internet connection is recommended for the best user experience.

2. The portal is optimised for use with the latest versions of Google Chrome, Mozilla Firefox, and Safari.

### 1.4 Purpose of the Portal:

This portal acts as a dynamic appendix, offering an alternative medium to engage with the research data in a hands-on manner. It extends the narrative of the thesis by providing a practical demonstration of the analytical processes and results.

### 1.5 Ensuring Access

The links provided are assured to be maintained by Limetheory, adhering to long-term accessibility as per the Australian Catholic University's archival policies.

## Appendix C: Ethics Approval Documentation from ACU

2019-130H Ethics application approved!

Kylie Pashley <Kylie.Pashley@acu.edu.au>

on behalf of

Res Ethics <Res.Ethics@acu.edu.au>

Mon 23/09/2019 2:06 PM

To:Christopher Branson <Christopher.Branson@acu.edu.au>;Justin Matthews <justin.matthews@myacu.edu.au>

Cc:Res Ethics <Res.Ethics@acu.edu.au>

Dear Applicant,

Chief Investigator: Professor Christopher Branson
Student Researcher: Mr Justin Matthews
Ethics Register Number: 2019-130H
Project Title: School improvement in remote Catholic schools: An exploratory case study
Date Approved: 23/09/2019
End Date: 30/09/2020

This is to certify that the above application has been reviewed by the Australian Catholic University Human Research Ethics Committee (ACU HREC). The application has been approved for the period given above.

Continued approval of this research project is contingent upon the submission of an annual progress report which is due on/before each anniversary of the project approval. A final report is due upon completion of the project. A report proforma can be downloaded from the ACU Research Ethics website.

Researchers are responsible for ensuring that all conditions of approval are adhered to and that any modifications to the protocol, including changes to personnel, are approved prior to implementation. In addition, the ACU HREC must be notified of any reportable matters including, but not limited to, incidents, complaints and unexpected issues.

Researchers are also responsible for ensuring that they adhere to the requirements of the National Statement on Ethical Conduct in Human Research, the Australian Code for the Responsible Conduct of Research and the University's Research Code of Conduct.

Any queries relating to this application should be directed to the Ethics Secretariat (res.ethics@acu.edu.au). Please quote your ethics approval number in all communications with us.

If you require a formal approval certificate in addition to this email, please respond via reply email and one will be issued.

We wish you every success with your research.

Kind regards,

Kylie Pashley
on behalf of ACU HREC Chair, Assoc Prof. Michael Baker

Senior Research Ethics Officer | Office of the Deputy Vice Chancellor (Research) Australian Catholic University
T: +61 2 9739 2646 E: res.ethics@acu.edu.au

THIS IS AN AUTOMATICALLY GENERATED RESEARCHMASTER EMAIL

## Appendix D: Participant Information Letter


# PARTICIPANT INFORMATION LETTER

**PROJECT TITLE:** School improvement in remote Catholic schools: An exploratory case study
**APPLICATION NUMBER: (2019-130H)**
**PRINCIPAL INVESTIGATOR:** Professor Christopher Branson
**STUDENT RESEARCHER:** Mr Justin Matthews
**STUDENT'S DEGREE:** Doctor of Education

Dear Participant,

You are invited to participate in the research project described below.

***What is the project about?***
The research project investigates the role that system leaders and school leaders play in school improvement….. Three schools will be critically examined to elucidate the…. In addition, the role that system leaders play will also be reviewed.

***Who is undertaking the project?***

This project is being conducted by Mr Justin Matthews will form the basis for the degree of Doctor of Education at Australian Catholic University, under the supervision of Professor Christopher Branson. Justin has over 15 years' experience in primary school education, and is currently a principal in a remote Catholic school.

***Are there any risks associated with participating in this project?***

As this project will be discussing potentially sensitive subjects surrounding school improvement methodologies, the participants' responses will be de-identified to protect their identities. Any publications arising from this research will use de-identified data designed to protect the biography, context and roles of the participants. These measures will ensure participants can speak in a transparent environment without the possibility of recrimination. Participants are free to withdraw from the project at any time, for any reason, without any repercussion.

***What will I be asked to do?***

This exploratory case study will use multiple methods of data collection in the form of interviews, documentary analysis and a reflective research journal. You will be asked to participate in two (2) semi-structured interviews. These interviews will be conducted either by teleconference or in person, depending on the location of the participant and what is mutually convenient. One of these interviews will be conducted in a group format and the other will be one-on-one. The questions you will be asked have been approved by the ACU Human Research Ethics Committee. The interviews will be held

approximately one month apart. The interviews will be digitally recorded and responses will be transcribed and de-identified.

***How much time will the project take?***

Each interview is expected to be forty minutes in duration. There will be two interviews either conducted in person or by teleconference depending on what is mutually acceptable.

***What are the benefits of the research project?***

This research will benefit participants in several ways. Participants will predominantly gain benefit by talking about the school improvement processes and how to improve these processes.

Firstly, it will contribute to the literature within school improvement by exploring the role of system leaders to extract patterns of processes, particularly in the way that school improvement is enacted within remote schools. Thus, the research will seek to understand the viewpoint of the participants and their beliefs, values and insights about school improvement in remote schools.

Secondly, this research will be of importance to all principals in remote Catholic primary schools. Its findings will not only provide specific knowledge about how to lead school improvement in a school but also how best to work with system leaders in order to maximise the learning culture for the students and teachers. It could form a part of professional learning in this essential area of remote school leadership to benefit those principals leading other remote schools in the same and other systems.

***Can I withdraw from the study?***

Participation in this study is completely voluntary. You are not under any obligation to participate. If you agree to participate, you can withdraw from the study at any time without adverse consequences.

***Will anyone else know the results of the project?***

In order to ensure anonymity, confidentiality and to comply with the Australian Catholic University guidelines, provisions will be provided regarding data storage and security. First, electronic data and audio recordings will be kept secure by password protection on electronic storage and a computer. Only the researchers will have access to the electronic storage and computer. Paper forms will be stored at the student researcher's office in a lockable cupboard.

During the project all electronic data will be stored on a password protected computer/database accessible only by the researchers. All paper data will be stored in a locked cabinet accessible only by the researcher(s). Participant identifiers will be removed at the point the interviews and focus group interviews are transcribed. Following completion of the study, all data (electronic and paper) will be stored at ACU Brisbane according to their storage standard operating procedures.

***Will I be able to find out the results of the project?***

If requested, a copy of the publication arising from this study will be sent to the participants.

***Who do I contact if I have questions about the project?***

If you have further questions regarding this project, you can contact Professor Christopher Branson at c.branson@myacu.edu.au or Mr Justin Matthews at jmatthews@myacu.edu.au

***What if I have a complaint or any concerns?***

The study has been reviewed by the Human Research Ethics Committee at Australian Catholic University (2019-130H). If you have any complaints or concerns about the conduct of the project, you may write to the Manager of the Human Research Ethics and Integrity Committee care of the Office of the Deputy Vice Chancellor (Research).

Manager, Ethics and Integrity
c/o Office of the Deputy Vice Chancellor (Research)
Australian Catholic University
North Sydney Campus
PO Box 968
NORTH SYDNEY, NSW 2059
Ph.: 02 9739 2519
Fax: 02 9739 2870
Email: resethics.manager@acu.edu.au

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

***I want to participate! How do I sign up?***

Participants can sign up by contacting Mr Justin Matthews by email on jmatthews@myacu.edu.au and signing both consent forms.

Yours sincerely,

Professor Christopher Branson

Mr Justin Matthews