

Article

Curriculum Middle Leader Practices and Teachers Perceptions of Their Effectiveness: A Study in New Zealand Secondary Schools

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Abstract: This study reports the quantitative results of middle leaders' self-reported practices and compares their responses to the perceptions of the teachers who report to them (n = 158). Likert scale questionnaires were used to measure the extent to which middle leaders focused on goal orientation, professional collaboration, effective instructional practices, and supporting teacher development within their department. The analysis provides insight into this phenomenon within six different state-funded secondary schools, with results showing middle leaders almost always rate their practices more effectively than the teachers who report to them. Common areas identified as requiring increased effectiveness were middle leaders' use of resources to support learning, use of data to support the instructional programme, and identification of effective professional learning opportunities for teachers. Reported levels of effectiveness compared with student academic achievement in the senior secondary school setting align with agreement ratings and the socio-economic status of students who attend the school. This paper highlights the need for the ongoing support of middle leaders to be provided with deliberate support and development for leading teachers.

Keywords: secondary school; middle leadership; self-rating; teacher rating



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1. Introduction

This paper draws on two areas of leadership theory. Firstly, there is an increasing body of literature that examines the practices of curriculum middle leaders in secondary schools, their relative effectiveness in improving the instructional practices of the teachers who report to them, and the implications for student academic outcomes. Secondly, there is limited research regarding leader/follower agreement in an educational setting that compares the self-ratings of leaders with the ratings of subordinates. A recent analysis of the latest academic achievement data for school leavers in every high school in New Zealand reveals an unsurprising pattern: good academic outcomes are strongly correlated with social advantage, and poor outcomes with social and economic deprivation [1]. In the research reported in this article, we test the notion/argue that effective curriculum middle leadership in secondary schools is an additional mitigating effect of student poverty because effective middle leaders demand consistently good teaching, which positively impacts student academic performance outcomes [2]. The term middle leaders in this article refers to those individuals with responsibility for curriculum leadership, often referred to in New Zealand secondary schools as Head of Department. Middle leaders are positioned in the centre of the school hierarchy, beneath senior leaders, and have responsibility for leading teachers and improving the quality of teaching and learning [3]. They play a critical role in leading teams of teachers to ensure that curricula are developed, delivered, and assessed, programmes are evaluated, and teachers are appraised [4]. The middle leadership literature has been developing over the last 25 years, and the area remains theorised [5], particularly in the context of secondary schools. Therefore, it is important to understand

the extent to which the middle leadership practices reported to be effective in the literature were, in fact, occurring in New Zealand secondary schools, given the pivotal nature of these colleagues driving classroom improvements to increase student learning outcomes [6]. This study is part of a larger international study using a specifically designed questionnaire that has been administered in both Australian and New Zealand secondary schools. This paper reports the results of selected questionnaire items from participants in six New Zealand secondary schools, with analysis completed at the school level. This study draws on data from self-reported middle leaders' perceptions of their enacted leadership practices and compares their views to the experiences of those practices reported by teachers in the same schools. We argue that school leadership is not only a matter of the intended behaviour of the school leader, but it is also a matter of how teachers perceive school leaders' behaviour [7]. The research questions this study is seeking to address are as follows:

1. To what extent do curriculum middle leaders and teachers within the same secondary school agree on the enacted and experienced middle leadership practices?
2. Are curriculum middle leadership practices more commonly enacted and experienced in some schools compared to others?
3. Is there any relationship between teachers' and middle leaders level of agreement regarding middle leadership practices at the school level and the academic achievement, socio-economic context, and engagement levels of students who attend the school?

In this study, we utilise four data points at the whole school level: middle leader ratings of themselves, teachers' ratings of middle leaders, and student engagement and academic achievement data.

1.1. Theory That Informed the Middle Leadership Practices Survey Instrument for This Study

Many studies on transformational, instructional, and distributed leadership are based on Likert-type questionnaires administered to teachers to understand the leadership practices they experience as colleagues within the school setting [8–11]. These ratings are then compared with the student academic outcomes reported by the school to test the relationship between various instructional leadership practices and the academic outcomes of students. The Best Evidence Synthesis (BES) work of Robinson, Hohepa, and Lloyd [11], which used meta-analysis to examine the leadership practices that impacted student outcomes, has had a substantial impact on the development of leaders within the New Zealand education system [12]. The Leadership BES specifically identified the five dimensions of instructional leadership practices as establishing goals and expectations, resourcing strategically, ensuring quality teaching, leading teacher learning and development, and ensuring a safe and orderly environment [11]. Robinson et al. argued that leadership practices centred around these dimensions make the biggest difference in student academic outcomes [13]. Similarly, confirmatory work was conducted in a further meta-analysis by Leithwood to develop the Ontario Leadership Framework (OLF) from research based on the evidence of effective school-level leadership with demonstrable direct and indirect effects on student learning, along with leaders underlying traits and dispositions [14]. Leithwood went on to analyse 32 studies examining the specific practices and dispositions of department heads, which resulted in detailed descriptions, or as referred to in this project dimensions, was the basis for the items developed for the Likert scales used in the questionnaire items used in this study [15]. The questionnaire items are discussed in the methodology section.

1.2. Relevant Literature and Theoretical Frameworks

The secondary school leadership structure in New Zealand is like many traditional school hierarchies where the responsibility for the academic performance of students cascades from the school principal to the middle leaders who sit within the middle of the hierarchy [16]. Theoretically, these leaders possess the specialised content and pedagogical knowledge to ensure effective teaching, assessment, or instruction [17]. Because schools and school systems have been reshaped by the demands of outcome-based accountability, the roles of school middle leaders have continued to evolve over the past two decades [18].

In today's test-based accountability environment, middle leaders in secondary schools and the teachers who report to them are held accountable for enhancing students' academic progress and outcomes [19]. In this context, middle leaders are required to enact up-to-date knowledge of curriculum, pedagogy, and assessment that, in turn, supports teacher quality and attitudes to ensure an effective instructional programme bringing about measurable student academic achievement [20].

Although there is some evidence in the international literature of teachers being surveyed about their opinions of school principal leadership effectiveness [21,22], there appears to be limited evidence in the research literature comparing curriculum-level leaders' perceptions of their performance with that of the teachers that report to them in a secondary school setting. In a previous (2012) study by the author, which compared middle leadership self-reported practices with academic outcomes, the teachers working in the departments of the middle leaders surveyed were also asked about their perceptions of the middle leadership practices they experienced [23]. The results of that research in ten New Zealand schools showed no statistically significant difference between the perceptions of the middle leaders or the teachers who reported to them, whether the practice was rated effective or not [2]. Closer scrutiny of this relationship at the secondary school level to understand middle leaders' perceptions of their effectiveness and teachers' experience of their leadership has not been published in the academic literature, and therefore, this article is an initial exploration drawing on two areas of research: the curriculum middle leadership research in secondary schools and the leadership/followership literature.

Research papers considering school leaders' and teachers' perceptions regarding leadership behaviour are limited in the field of education, especially in compulsory education [22], and are often focused on school principals' behaviours and teachers' responses to their levels of effectiveness. However, the evidence with principal-teacher ratings suggests that the self-perceptions of school leaders and the perceptions of teachers do not necessarily match [21] and that school leaders tend to overrate themselves on important leadership practices compared to teachers [24,25]. This divergence of views about a leader's performance can result in negative consequences, with studies confirming that the alignment of leaders' perceptions or ratings of their performance with those who report to them is related to leadership effectiveness [7]. Daniels et al. [21] argue that leader-member exchange (LMX) theory correlates with relation-oriented behaviour [26] and assumes that the relationship between leaders and followers is dynamic and contextual in nature [27]. Daniels et al. [21] explain that high levels of leadership transactions with colleagues are characterised by mutual trust, loyalty, affect, respect, and contribution [26], and low levels tend to be purely transactional and lack collegial relationships. Importantly, in the context of this study, Daniels et al. [21] argue that leader-member exchange predicts important outcomes related to organisational commitment, trust in management, and lower staff turnover [28]. Convergence among school leaders' perspectives and teachers' perspectives has rarely been analysed in schools. Studies on leadership behaviour outside the field of education have consistently shown that ratings obtained from different sources do not converge well, and correlations between leaders and those that report to them are typically low or not significant [29,30].

Atwater and Yammarino have drawn several interesting conclusions from studies that compare the self-ratings of leaders with the ratings of their colleagues, which continue to be relevant despite being developed 20 years ago [31]. They concluded that self-ratings tend to be inflated and higher than ratings from those that they lead [29]. They argue that ratings are more accurate compared to objective criterion measures [32], and inaccurate self-raters are poorer performers [33]. Atwater and Yammarino describe levels of agreement between leaders and their employees as a relative phenomenon and, therefore, self-other agreement as relative [31]. In this study, we have used the magnitude of self-other differences to categorise the extent to which middle leaders over or underrate their performance compared to teachers [7]. Therefore, we have applied the self and subordinate rating scale ideas of Atwater and Yammarino [31] to the middle leaders and teachers within one school, using

the same criterion to understand the common practices that are enacted and experienced across a group of six representative schools and to understand the levels of agreement of both middle leaders and teachers within a school.

2. The New Zealand Context

The importance of effective and equitable education opportunities for individual and collective well-being is almost universally accepted [13]. In high-performing education systems, most students have the opportunity to attain high-level skills, regardless of their own personal and socio-economic circumstances [34], with the implication being that it is possible for countries to develop education systems that are both excellent and equitable [35]. The challenge for practitioners and policymakers is to find ways of breaking the link between disadvantage and educational failure. Over the last 10 years, the New Zealand government has developed policies, guidelines, resources, and professional development opportunities for New Zealand teachers and leaders to shift the outcomes for students who are underserved by the education system, particularly those from low socio-economic backgrounds [3]. Despite claims that New Zealand education is the envy of the world due to the commitment of dedicated teachers, schools, and successive governments to raise achievement for all students [36], there has been little improvement for those at the bottom, and the PISA results [37] show a general downward trend for students performing in both the highest and lowest quartiles [38]. While many students flourish in the New Zealand education system, there is a concerning number of students whose academic results are declining [37,39]. However, it is also worth noting that New Zealand has a more equitable schooling system than many other countries, which is borne out in the fact that, where the inequities occurred in New Zealand, the biggest gaps between top and bottom achievers in PISA were within the same schools, not between different schools [38].

In the pursuit of improved student outcomes, the management and administrative roles of New Zealand school leaders have increased. External accountability measures and expectations have accumulated both in relation to school-level reporting and teacher-level performance management. Consequently, this accumulation has contributed to conditions conducive to a greater distribution of leadership and accountability for curriculum middle leaders, who are held accountable for the academic results of students studying in their departments [40]. The organisation of secondary schools into subject departments is like many Western countries, despite the diversity in school type, size, location, vision, and governance style of schools [3]. Senior and middle leaders are expected to be active in curriculum design as well as support learning environments through the pastoral care of students while also meeting the quality assurance requirements associated with national forms of assessment [40]. In a Post Primary Teachers Association (PPTA) survey conducted with 13,994 New Zealand secondary school teachers in 2016, 43% of respondents indicated they currently held a curriculum leadership role in a secondary school [41]. The respondents ranked activities that had a negative impact on their role, listing tasks such as managing changes in the performance appraisal process, the demands around digital technologies, quality assurance for assessment procedures, and recruiting suitable staff. These respondents were also concerned about the unmanageable workload, planning and monitoring resources and budgets, taking responsibility for professional learning, and crisis management when there were staffing issues.

Most schools in New Zealand are state-funded (85%), as are all the schools represented in this research project. Secondary education begins from Year 9 (around 12–14 years old) up to Year 13 (around 16–18 years old). The school exit qualification in New Zealand is called the National Certificate of Educational Achievement (NCEA). This is a standards-based qualification system where curriculum subjects are assessed by a mix of exams and internal assessment endorsements that are nationally moderated. Students are recognised for their achievement at each level by gaining NCEA with Merit or with Excellence [42]. Students work towards the National Certificate of Educational Achievement (NCEA) from 15 years old when they begin level 1 in Year 11 and work through to level 3 in Year 13.

University Entrance (UE) is the minimum requirement to go to a New Zealand university and is awarded to students who have gained NCEA Level 3 and have also met additional requirements in literacy and numeracy [43].

To resource publicly funded schools based on equity, the New Zealand government has recently developed a system called the Equity Index Identifier (EQI) [44]. This statistical tool is used by the Ministry of Education to target additional funding and resources to schools in New Zealand that provide an education to students facing socio-economic barriers and, therefore, needing additional funding. The EQI tool utilises a combination of factors to judge student equity, such as parents' incomes, qualifications, and ages at the birth of their first child, along with any criminal records, time spent on a benefit, social welfare interventions for their children, and transience [1]. An EQI indicator is linked to a student, not the whole school community, which means that if a student transfers enrollment to a different school, their funding goes with them. An additional indicator of the socio-economic background of students who attend a school is the publicly available data regarding the additional funding provided by either the government or parents. Schools that opt into the donation scheme receive additional funding from the government of NZD 150 (excluding GST) per student in exchange for not seeking donations from the school community (except for overnight camps) [45].

3. Materials and Methods

The method for developing an understanding of the middle leadership practices occurring in state-funded New Zealand secondary schools was devised to collect both quantitative and qualitative data and recruit middle leaders for subsequent in-depth interviews. The questionnaires with Likert scale response scales were designed for both curriculum middle leaders and teachers to identify the middle leadership dimensions they enacted (middle leaders) or experienced (teachers) within the department and/or school where they were employed. There was an opportunity for middle leaders to reflect on their own practices, while teachers were asked to reflect on the leadership practices of the middle leader they report to in their main learning area. Respondents could provide further ideas or examples by writing in the comments sections. Although the dimensions described in the questionnaire items were framed within the four leadership domains identified in the Ontario Leadership Framework (OLF) [14], some minor adjustments were made for the New Zealand context to accommodate practices linked to culturally responsive leadership and practice [3], with results that will be reported in a subsequent paper. The questionnaire items reported in this paper were categorised as follows: Setting direction involves identifying a vision and setting goals. Building relationships and developing people involves encouraging staff to develop their teaching practices and building trust with colleagues and students. Supporting desired practices includes distributing leadership. Improving the instructional programme includes collaboration. The survey instrument was pilot-tested with a group of educators, and small modifications were made considering their feedback.

This study was conducted in accordance with the Declaration of Helsinki. The initial study design was approved by the University of Melbourne (protocol number 20433 on 21 February 2023) and ratified by the University of Auckland Ethics Committee on 1 March 2023. Informed consent was obtained from all subjects involved in the study. Once ethical approval was granted, a recruitment email was sent to all secondary schools in New Zealand. Of these, 18 school leaders agreed to the participation of their staff in the survey. The teachers and curriculum middle leaders in the schools were emailed an anonymous link via a school administrator. Separate surveys with matching items were sent to middle leaders and to the teachers. The sets of results from six schools are reported in this article, selected because these six schools had the highest numbers of middle leaders and teachers who participated. The challenge faced in education research is that many of the phenomena we seek to measure are not physical but cognitive in nature. This study required middle leaders to 'self-report' and teachers to indicate the extent to which they observed and

experienced the middle leadership practices described in each questionnaire item [46]. The Likert scale is a popular type of measurement scale in educational research to measure attitudes or the affective in school settings [47] because it allows a quantitative measure for non-physical phenomena by asking individual respondents to make a series of qualitative assessments [46]. Therefore, a traditional Likert scale with five options of strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree [48] was used to measure the extent to which middle leaders enacted and teachers experienced the curriculum middle leader practices.

The quantitative data collected in this study consisted of the results of 158 survey responses, of which 53 participants were middle leaders and 105 were teachers. The participating schools varied in size, ranging from approximately 700 to 2000 students. Three schools were situated in metropolitan areas (68% of responses), and three schools were in rural/regional locations (32% of responses). Of the respondents, 46 identified as male, 111 as female, and one chose not to answer the question. In order to provide evidence of the variable student cohorts and socio-economic context of each school selected for analysis in this study, publicly available data [49] for each school is presented in Table 1. This information outlines details of participants and participating schools, such as the school type, equity index, and school donation and funding sources reflecting the socio-economic status of students who attended the school in 2022–2023. School stand-down data, as compared with the national average (2022), is included to provide an indication of where student engagement in learning may be lower and the extent to which students were disciplined at the school due to their behaviour [49]. Stand-downs refer to the temporary removal of a student from school and are defined as a form of “discipline that may be applied in cases of gross misconduct or continual disobedience or where student safety is at risk” [50]. The measure used for academic outcomes in this study is the percentage of students in the school who gained university entrance in Year 13 (2023).

Table 1. School Participation Data [49]. Student achievement data are from 2023, when the questionnaires were completed.

School Code	School Type (All Schools Are State Funded)	Roll Size (Students)	EQI Number *	Community Donations Permitted	Stand-Downs-% Diff. Compared to National Average (2022) ^	% Year 13 Attaining UE (2023)	ML Participant Numbers	Teacher Participant Numbers
School A	Regional town, 1500–2000 co-ed school		445	No	13% above	48.9	9	15
School B	Regional town, 500–1000 co-ed school		459	No	114% above	48.7	4	10
School C	Regional city, 500–1000 Girls school		431	No	71% below	64.1	5	8
School D	City, 1000–1500 Co-ed school		433	Yes	38% below	60.7	13	25
School E	City, 1000–1500 Co-ed school		476	No	154% above	33.3	12	12
School F	City, Over 2000 Girls school		404	Yes	79% below	78	10	35
Total							53	105

* Equity Index Identifier (EQI). The average EQI for schools in New Zealand is 463. The lowest EQI number allocated to a school is 344, and the highest is 569 [44]. ^ Age standardised stand-down rate per 1000 students–school level data compared with the New Zealand average for the same year.

Presentation of Data for Analysis

Given that the Likert scale is a bipolar scale to measure positive or negative responses to a statement [51,52], for the purposes of analysis and reporting the results, researchers have aggregated both the positive and negative responses to each item. The neutral responses are also reported. Harpe argues that sometimes it is appropriate to aggregate scales in order to understand if an individual’s experience of underlying phenomena

is relative to the number of individuals who agree, disagree, or are neutral about their perceived enactment or experience of a middle leadership practice [46].

4. Results

The results of this study have been analysed by the school, with questionnaire items listed with the middle leadership and teachers' level of agreement and neutral and negative response values. Responses have been colour-coded to show the degree and type of self-other rating differences to categorise leaders into high-estimators and in-agreement (green), underestimators and in-agreement/good (green or orange), or disagreement/poor (red or blue) raters [22], with an additional category of inconsistent or undetermined responses often due to the number of neutral responses (orange). Table 2 shows the generalised response rates for middle leaders and teachers for each of the middle leadership dimensions in each of the schools. Each group of responses is colour-coded for each dimension by the school using a four-tiered coloured rating scale. The green code denotes agreement (<15% difference) between middle leaders and teachers for a dimension, with positive responses indicating that most middle leaders and teachers agree that the practices are occurring in their school. The orange colour indicates a level of disagreement between middle leaders and teachers, highlighting where there is disagreement (15–30%) or where 20% or more neutral responses may indicate less consistent middle leadership practices identified by middle leaders and teachers in the school. In some dimensions, the neutral responses have resulted in the code being coloured orange as an indicator that some respondents were unable to determine if a practice was occurring in a school or not, which, when combined with other responses for that dimension, could indicate inconsistent application of the practice within the school. Where the dimension was given a red code, there is disagreement (>30%) between middle leaders and teachers regarding the practices occurring in the school. Furthermore, the red code was used in dimensions where there was a negative response from more than 15% of middle leaders, teachers, or both. An additional blue code was applied to red codes to highlight where a higher percentage of respondents ($\geq 30\%$) have responded as negative or neutral to their perceptions of this middle leadership dimension occurring in the school. A yellow highlight was used to indicate where middle leaders in the school underestimated their practices compared to the teachers. During coding, if more than one code could be applicable to a dimension, the code with the lowest score was used.

In this study, middle leaders underestimate their practice compared to teachers' perceptions in just 20 out of a possible 114 rating opportunities (Table 2 yellow highlight). This occurs in five out of the six schools. In School C, the middle leaders underestimate their practice compared to teachers in eight of the 19 dimensions; in School B, five times; in School A, three times; and in Schools E and D, two dimensions.

A middle leadership rating was applied to the data to enable a comparison of school middle leadership practices with student UE achievement levels at each school. Codes were rated (Green = 4, Orange = 3, Red = 2, Blue = 1) to enable an average score for middle leadership practices used in each school. These data are displayed in Figure 1.

Table 2. Curriculum middle leader and teacher ratings of the enacted and experienced middle leader dimensions.

Survey Question	Response Rates	School A—%		School B—%		School C—%		School D—%		School E—%		School F—%	
		ML (n = 9)	Teach. (n = 15)	ML (n = 4)	Teach. (n = 10)	ML (n = 5)	Teach. (n = 8)	ML (n = 13)	Teach. (n = 25)	ML (n = 12)	Teach. (n = 12)	ML (n = 10)	Teach. (n = 35)
Middle leadership dimensions:													
Build a shared vision for the learning area	Positive	100	100	100	80	100	74	100	76	100	84	100	77
	Neutral	0	0	0	20	0	13	0	12	0	8	0	14
	Negative	0	0	0	0	0	13	0	12	0	8	0	9
Identify specific, shared, short-term goals for the learning area	Positive	100	80	75	90	100	87	100	76	100	92	100	91
	Neutral	0	20	25	10	0	13	0	8	0	0	0	3
	Negative	0	0	0	0	0	0	0	16	0	8	0	6
Create high expectations for staff in the learning area	Positive	100	100	100	70	100	87	100	72	100	67	100	83
	Neutral	0	0	0	20	0	13	0	12	0	25	0	11
	Negative	0	0	0	10	0	0	0	16	0	8	0	6
Create high expectations for students in the learning area	Positive	100	93	75	90	80	87	100	72	100	92	100	86
	Neutral	0	7	25	10	20	13	0	20	0	8	0	11
	Negative	0	0	0	0	0	0	0	8	0	0	0	3
Communicate the vision and goals to the staff in the learning area	Positive	100	100	100	90	100	87	100	80	100	92	100	86
	Neutral	0	0	0	10	0	13	0	0	0	8	0	6
	Negative	0	0	0	0	0	0	0	20	0	0	0	8
Encourage staff to reflect on their practice	Positive	100	93	100	90	100	88	100	88	100	83	90	86
	Neutral	0	7	0	10	0	12	0	8	0	0	10	11
	Negative	0	0	0	0	0	0	0	4	0	17	0	3
Encourage staff to try new practices to enhance student learning	Positive	100	93	100	80	80	88	92	84	100	92	90	80
	Neutral	0	7	0	10	20	12	8	4	0	0	10	11
	Negative	0	0	0	10	0	0	0	12	0	8	0	9
Provide opportunities for staff to learn from each other	Positive	89	80	100	80	80	63	77	80	100	92	90	80
	Neutral	11	13	0	20	20	37	23	4	0	8	10	14
	Negative	0	7	0	0	0	0	0	16	0	0	0	6

Table 2. Cont.

Survey Question	Response Rates	School A—%		School B—%		School C—%		School D—%		School E—%		School F—%	
Model the school's values and practices	Positive	100	87	100	70	100	100	100	84	92	84	100	89
	Neutral	0	13	0	20	0	0	0	12	8	8	0	11
	Negative	0	0	0	10	0	0	0	4	0	8	0	0
Build trusting relationships with staff	Positive	100	100	100	70	100	100	100	88	100	84	100	83
	Neutral	0	0	0	10	0	0	0	4	0	8	0	11
	Negative	0	0	0	20	0	0	0	8	0	8	0	6
Build a collaborative culture	Positive	100	87	75	70	80	88	100	88	100	84	90	74
	Neutral	0	13	25	30	20	12	0	0	0	16	10	23
	Negative	0	0	0	0	0	0	0	12	0	0	0	3
Distribute leadership	Positive	89	80	75	70	100	88	92	76	84	100	70	80
	Neutral	11	20	0	10	0	12	8	16	16	0	30	11
	Negative	0	0	25	20	0	0	0	8	0	0	0	9
Allocate resources to support learning	Positive	100	73	100	50	20	100	77	88	75	92	80	77
	Neutral	0	27	0	20	80	0	23	0	25	8	10	17
	Negative	0	0	0	30	0	0	0	12	0	0	10	6
Actively provide instructional support to teachers	Positive	100	73	75	60	20	75	92	72	100	67	90	71
	Neutral	0	20	25	30	60	25	8	12	0	25	10	20
	Negative	0	7	0	10	20	0	0	16	0	8	0	9
Use multiple sources of evidence to analyse student progress	Positive	78	87	75	60	40	75	77	56	77	67	90	68
	Neutral	22	13	0	20	20	25	15	32	15	25	10	20
	Negative	0	0	25	20	40	0	8	12	8	8	0	12
Collaborate with staff to interpret data on student learning	Positive	78	87	50	80	80	75	84	68	100	67	90	80
	Neutral	22	13	25	20	20	25	8	16	0	8	10	14
	Negative	0	0	25	0	0	0	8	16	0	25	0	6
Provide conditions for teachers to use data effectively	Positive	89	73	50	50	40	63	84	60	92	67	70	65
	Neutral	11	27	0	30	60	37	8	20	8	8	30	26
	Negative	0	0	50	20	0	0	8	20	0	25	0	9

Table 2. Cont.

Survey Question	Response Rates	School A—%		School B—%		School C—%		School D—%		School E—%		School F—%	
Identify appropriate professional learning activities for staff within the learning area	Positive	78	80	50	70	20	63	92	76	100	75	80	68
	Neutral	22	20	25	10	80	37	0	12	0	17	10	20
	Negative	0	0	25	20	0	0	8	12	0	8	10	12
Lead professional learning activities within the learning area	Positive	78	80	25	70	100	88	92	72	100	75	90	60
	Neutral	22	20	25	10	0	12	8	8	0	17	0	31
	Negative	0	0	50	20	0	0	0	20	0	8	10	9
Middle leadership score (rating 1–4/number of dimensions)		3.52		2.26		3.15		2.63		2.94		3.47	

Key:

- Agreement (<15% difference)/positive response
- Disagreement (15–30%)/20% or more neutral response
- Disagreement (>30%)/15% or more negative response
- Negative or neutral response (≥30%)—additional code applied to red codes
- Middle leaders underestimated their practice compared to teachers

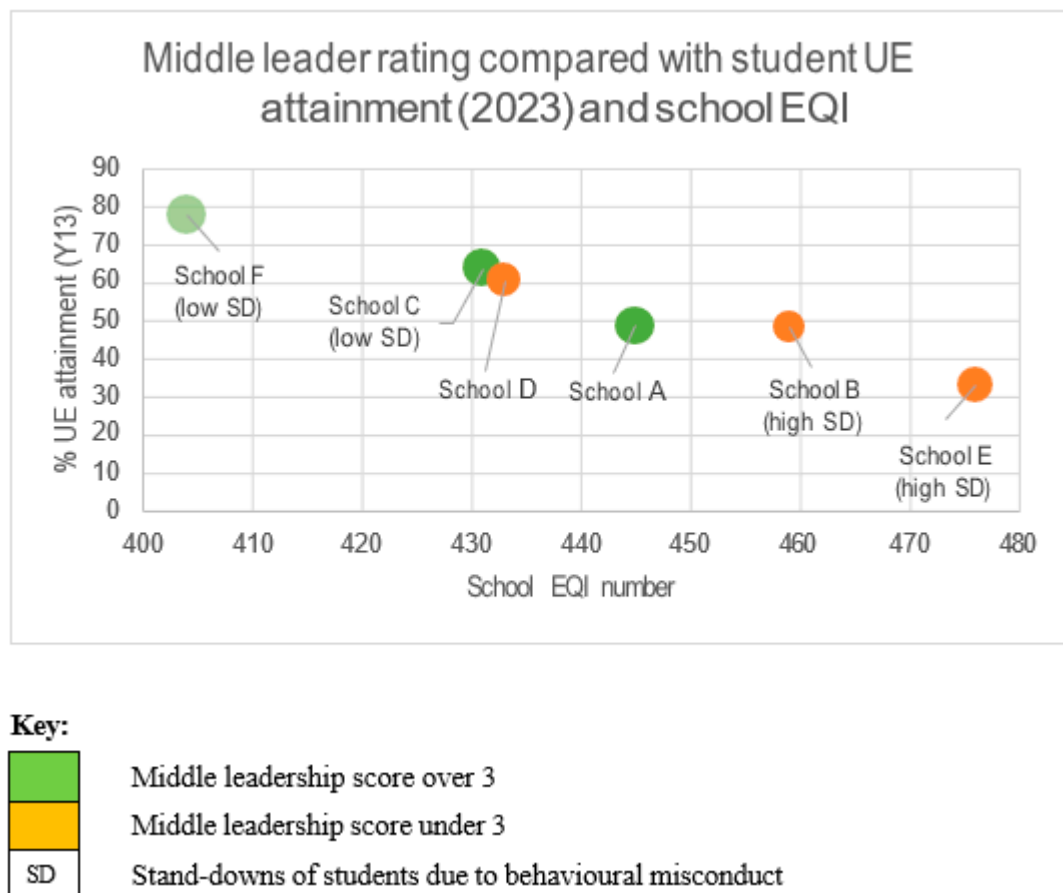


Figure 1. Curriculum middle leader rating compared with student UE attainment (2023), school equity index and student stand-downs.

Figure 1 provides an illustration of the percentage of students who gained UE in each of the participant schools compared to the overall socio-economic status of students in the school (EQI) and the middle leadership score (shown by bubble size and colour) calculated in Table 2. Furthermore, schools that had over 50% fewer stand-downs of students or over 50% more stand-downs, when compared to the national average, have been noted on the graph. The school with the highest UE pass rate (F) is a single-sex girls' school situated in a large middle-class urban area of a city. It has a high middle leadership practices rating (3.47), with very little disagreement between middle leaders and teachers about the enacted and experienced practices. School F also had the lowest stand-down instances of the sample (79% below the national average). The data show School F as having the highest UE entrance rate for students in the sample and the lowest number of students from low socio-economic backgrounds. Conversely, the co-ed school (E), situated in a lower socio-economic area of a large urban city, has the lowest percentage of students who gained UE in the sample and also the highest instances of stand-downs (154% above the E (2.94)), which indicates an inconsistent level of effectiveness by respondents. The data reveal a large variance in stand-down instances in secondary schools and highlight the vastly different contexts in which New Zealand middle leaders teach and lead. Stand-down data provide an indication of the schools where student engagement in learning may be low [49] and where middle leaders and teachers may have greater responsibilities with regard to student discipline. The New Zealand Education Review Office recently released a report on the significant behavioural challenges teachers face in schools [53]. The report highlights the burden of behavioural misconduct on teachers and school leaders, with 47% of teachers reporting that responding to challenging behaviour impacts their ability to teach and 60% of school leaders noting a lack of time to deal with behavioural issues [53].

The rurally located School A is reporting UE attainment for year 13 students at 48.9%, at similar levels as School C and D, despite educating students from lower socio-economic backgrounds. School A received the highest middle leadership dimension score (3.52) and agreement between middle leaders and teachers regarding their perceptions of effectiveness. Schools C and D report similar levels of UE academic results for students with a similar EQI but with differentiated middle leadership dimension scores. School C is also a single-sex girls' school in a small city on the south island of New Zealand, and in this school, the participant middle leaders were more likely to score themselves lower in some practices than the teachers (3.15). School D had one of the lowest middle leadership scores in the sample (2.63) and considerable disagreement between middle leaders and teachers regarding their perceived enactment and experience of practices. In School D, there were just two dimensions where over 30% of respondents were negative or neutral regarding the extent to which they enacted or experienced effective middle leadership practices. School B had the lowest middle leadership score (2.26) of the sample and eight dimensions, where over 30% of teachers and middle leader respondents recorded negative or neutral responses regarding the extent to which the middle leadership dimensions were enacted or experienced.

5. Discussion

The analysis of whole school results revealed considerable inconsistency between middle leader and teacher ratings, as in some schools, the results for both groups were similar in some middle leadership dimensions but not in others. Overall conclusions cannot be drawn from a representative sample of six schools; however, there are interesting patterns that can be drawn from this small study that could be further explored with a larger data set, and qualitative interviews with middle leaders and teachers would help to probe and understand the findings more fully. Although these middle leader data are 'self-reported,' the questionnaire was anonymous, so middle leaders were able to reflect honestly on their practices without fear of repercussions from senior leaders. To some extent, the teacher responses support their evaluation ratings, as there are some levels of agreement between middle leaders and teachers in all the schools. In two schools, there are strong levels of agreement on all the items, and in one school (B), middle leaders and teachers disagreed with each other on eight items, which could be considered detrimental to the effective running of a school. It is also important to note that while the items are grouped into dimensions and were required to be responded to as separate entities, in reality, the practices are not discrete and are intertwined in a school environment.

5.1. Levels of Agreement between Curriculum Middle Leaders and Teachers within and across the Sample

Devos et al. explain that the most important finding throughout their studies of comparing teachers' and school leaders' perceptions is that school leaders who overestimate their leadership behaviour are, in general, associated with lower levels of teachers' attitudes and school culture variables compared to under estimators [22]. They posit that schools with overestimators run a greater risk of having a weaker culture, with teachers who believe that the principal is less able to respond productively to change compared to other schools. In this study, a number of middle leaders are represented in each school group, so the combined teacher data represent the ratings of the practices of more than one middle leader in a school. However, there are clear school-level trends, such as in School D, where there is more than 30% disagreement regarding the perceived and experienced leadership practices in eight of the 19 middle leadership dimensions. Devos et al. [22] claim an explanation for the low scores of over estimators may be that they are inclined to avoid seeking feedback from their teachers or to distort this feedback in order to preserve their self-esteem and leave their behaviour unchanged [54]. Relevant to the study reported in this paper is that under estimators set higher standards for their leadership practice and are more critical of their own performance than leaders who

rate themselves highly. The underestimators make adaptations to their behaviour to involve teachers in the development of the school's vision which is comparable to the in-agreement/good leaders [22] (p. 307). It could be argued that schools with the largest number of underestimators have the most effective middle leaders, although the levels of underestimation by middle leaders in this sample are very low.

5.2. Curriculum Middle Leadership Practices More Commonly Enacted and Experienced in Some Schools Than Others

The leadership practices involving building a shared vision, identifying short-term goals for the learning area, creating high expectations for students in the learning area, and encouraging staff to learn from each other and try new instructional practices were generally regarded as occurring in all the schools in the sample, at least by the middle leaders. Ainscow argues that the starting point for strengthening the capacity of a school to respond to learner diversity should be the sharing of existing practices through collaboration amongst staff and joint practice development [55]. The importance of vision and goal-setting was apparent from the responses of the participants in this study. However, while the middle leaders themselves rated their capacity highly in this regard, not all teachers concurred with their rating. This mismatch could be problematic for department teams, as noted by Locke and Latham, who argue that goals must be specific and achievable by teachers [56].

The most disputed middle leader practice related to middle leaders' collaboration with teaching staff was in the use and interpretation of data. These practices were also more likely to be rated lower by middle leaders themselves. The study reported in this paper reveals that middle leaders need more support in collecting and utilising data to support teacher development and classroom practices that are adapted to meet student needs. Middle leaders and teachers need to collaborate and develop their professional knowledge in utilising data interventions that challenge the status quo and consider how they work together to collect and use data in ways that contribute to the well-being, achievement, and learning of students. A recent research project in Dutch secondary schools revealed working in data teams was a promising strategy for implementing data use in schools and built the professional capability of all involved [57]. Teachers in this study indicated they required more help in the provision of conditions to use data effectively and the ability to utilise multiple sources of evidence to analyse student progress.

Another area where teachers indicated they required improvement in middle leadership practices was in their identification of professional learning activities for staff within the curriculum area and leading learning activities for staff. Grissom and colleagues argue that school leaders should focus their efforts on the skills, knowledge, and behaviours of engaging in instructionally focused interactions with teachers, building a productive school climate, facilitating productive collaboration and professional learning communities, and managing personnel and resources strategically [58] (pp. 15–16). Edwards-Groves, Grootenboer, and Ronnerman studied the ways middle leaders facilitated a culture of relational trust through an action research project and found that the way middle leaders communicate with the teachers was fundamental, requiring focused dialogue, coaching conversations, and the ongoing interrogation of their teaching practices [59]. These types of conversations require relational trust in building robust collegial professional learning communities because, as Donohoo and Velasco claim, addressing student learning needs requires the problem-solving and collective wisdom of the group to engage in problem-solving activities that draw on a range of expertise [60]. In a distributed leadership model, appointed leaders empower their team members and build a collaborative sense of ownership [61]. The evidence from this study in relation to professional learning supports the assertions of Lipscombe et al. [62] that in order to increase the authenticity of middle-leader professional development, programmes should have a focus that supports collaborative inquiry. Donohoo and Velasco support a group-focused problem-solving approach, utilising evidence and data across the teacher team within the learning area [60]. Thompson

et al. explain that teachers' effectiveness grows at a greater rate if they are working in a supportive school environment, which, in secondary schools, is the environment of the curriculum department team where the knowledge and insights reside [63]. Therefore, it is important to support middle leaders to understand what motivates and inspires teachers to become continuous improvers and advance their teaching practices throughout their careers [64].

A further area where participants expressed levels of disagreement and some dissatisfaction was the extent to which middle leaders provided instructional support for teachers in the school. In the dimension regarding building trusting relationships with staff, all the middle leaders self-rated highly, with some teachers also rating this practice as effective. However, in School B, 30% of teachers rated this practice as neutral or negative. Bryk and Schneider highlight the importance of relationships as the foundation of high-functioning teams in schools [65]. The results of this research reveal that middle leaders understand their responsibilities to support teachers but are not consistently delivering the types of collaborative learning opportunities required. Leading a curriculum learning area requires collaboration with school leaders and principals, as well as with the dedicated team of teachers who deliver curriculum to students. Therefore, there is a need to form sustained, trustworthy, collegial relationships with school executives, teacher colleagues, and early career teachers [66]. Highfield and Rubie-Davies [2] assert collegial relationships only contribute to student academic outcomes when they are based on strong professional discussion and problem-solving that is evidence-informed.

5.3. The Relationship between Curriculum Middle Leadership Practices at School Level and Academic Achievement, Socio-Economic Context, and Student Engagement

The patterns of student academic achievement and instances of stand-downs, an indicator of student engagement, are strongly correlated with the EQI number of the school (Figure 1). Therefore, high academic outcomes are associated with social advantage and poor outcomes with social and economic deprivation [1]. One argument for stronger levels of agreement regarding effective middle leadership practices and student academic outcomes at School F is that high student engagement (as indicated by low stand-downs) enables middle leaders and teachers to devote more time and energy to leadership practices, which makes a difference to student achievement. Author and Rubie-Davies [2] found that collegiality alone between staff could negatively impact student achievement unless there were a development of collegial practices based on data-informed, professional discussions between teachers [2,56]. Furthermore, an economic advantage in school communities may result in the attraction and retention of high-quality teaching staff [67]. Sullivan, Johnson, and Simons explain international concerns regarding the teacher labour market, including in New Zealand and Australia, where many schools in lower socio-economic areas continue to find it difficult to attract effective and experienced teachers [67]. In Australia, 50% of new graduates leave the profession within 5 years of entry [68]. Furthermore, the study by Hirsh and Segolsson showed that where middle leaders had special responsibilities for demanding and time-consuming tasks in the analyses of teaching and instruction, teachers in the department were more likely to be engaged in collaborative learning [69]. If these negative aspects of the role are aligned with the school types in this research, there is a clear alignment with well-resourced low-EQI and single-sex girls schools having higher student academic results in the senior secondary school. Middle leadership research in Sweden [70] reveals that recognition strongly contributes to middle leaders' sense of empowerment and satisfaction, both in the form of monetary compensation [71] and through appreciation shown by colleagues and the principal (see, e.g., Hirsh and Segolsson [69]). Therefore, unravelling the factors that influence middle leaders' propensity to translate their sense of agency into effective instructional practices could be one key determinant in bringing about higher levels of student engagement and improvement within the secondary school context.

6. Conclusions

This study reveals the inconsistency of middle leadership practice in secondary schools, yet both middle leaders and teachers are able to precisely identify the deficits that require improvement. To some extent, the results of this research project support the views expressed by Lipscombe et al. [62] that middle leaders have a consistent view of what the leadership practices they should be enacting are, but the teachers in their teams experience variable performance of their practices. Recent research has shown that many middle leaders do not have clear role descriptions, which leads to difficulties in fulfilling these roles and understanding the expectations of their position [15,72]. Therefore, clear policies and job descriptions based on the research literature would help middle leaders navigate their responsibilities and meet the expectations of their colleagues, which in turn is likely to positively impact the learning of students.

In a recent review in Australia, Lipscombe et al. [62] found that site-based professional development and inquiry-focused projects provided contextually focused, meaningful learning and leading experiences that were beneficial to middle leaders and directly impacted the quality of teacher learning and development [73] and therefore student outcomes [8]. Sinnema et al. assert that problems of equity and student underachievement and engagement must be solved, not only in the macrosystem of the school through policies and goal setting but, more importantly, in the everyday practices of teachers and leaders [74]. We support the argument that effort is best focused on building the expertise of middle leaders to address their own and others' skill gaps to ensure that interactions between teachers and their leaders surface the key beliefs and practices that enable all students to achieve. Moreover, previous studies have shown that a one-size-fits-all approach does not work to build the capacity of middle leaders [75,76] and that schools and systems need to build professional learning opportunities that match the needs of middle leaders according to role and career stage. Therefore, the site-based approach, as recommended by Lipscombe et al. [62], which can be undertaken in the daily work of middle leaders, must be embedded in the role descriptions and duties of middle leaders. They must be provided with the ongoing time and support to not only fulfil their current duties but also to develop as leaders as part of their role. Ongoing support from a mentor or coach has also been shown to be a key form of professional learning for middle leaders [75,76]. Additionally, the opportunity for 360-degree reviews and constructive feedback from the teachers in their teams can also provide the opportunity for middle leaders to continuously develop the skills and knowledge needed to lead teachers to improve their practice, which in turn leads to improved outcomes for students. What is abundantly clear is that middle leaders cannot be left to their own devices and that school and education system leaders have the ongoing responsibility to nurture and develop middle leaders for the immediate benefit of the school and students and to build a viable leadership pipeline for the future.

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